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NEW COMPUTER EXPRESS

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MEGA DRIVE SEGA

EXCLUSIVE

SEGA'S 16-BIT SENSATION

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CDI standard: the giants agree

A definitive standard for the much touted technology of tomorrow – Compact Disk Interactive – has at last been completed.

Philips and Sony, the companies that originated compact disks and CD-ROM, have shipped out their new technology to hardware manufacturers looking to make CDI players as well as to prospective software writers interested in authoring applications for the machine.

It is hoped that CDI will be available to the general public before 1992. When machines appear they will "obviously be at consumer prices".

CDI will plug straight into a television and can be operated by mouse, keyboard or remote control. Its main uses will be as apparently sophisticated databases combining text, speech, audio and graphics. Possibilities exist for the machines to run games, although something like word processing is apparently not feasible.

Those hardware manufacturers that already have the rights to original CD technology (i.e most large electronics companies) will be able to churn out machines for no fee. Others though will have to pay Philips/Sony.

That duo won't be launching a machine proper until a software base has developed. Audio CD players of the future will be compatible with CDI software and vice versa.

Philips appears to be confident that the CDI standard will be accepted, given that CD itself was spared the growing up pains of, say, video.

"This is a completely different product from anything else," commented a Philips spokeswoman. "It combines the personal computer, video and audio player."

• All the best people read *New Computer Express* – and so does Bruno Brookes. The fine Radio One jock was spotted at the recent Commodore Show browsing through our pages for all the latest on his beloved Amiga and other matters computerish. Bruno has owned an Amiga for six months now and uses it to catalogue his CD collection and sundry other DJ things. Fave game is *Interceptor* and he plans to organise his accounts on the machine.

£200 machine ups stakes in 16-bit war

SEGA CONSOLE WOWS THE JAPS

Sega's stunning 16-bit console will cost £200 when it goes on sale here next September.

The new machine hit Japanese streets last week and initial batches of tens of thousands sold out within days. *Express* has laid its hands on what is believed to be the only such machine in the UK.

Despite previous talk of direct compatibility with existing Sega cartridges, the new deck will require for this an adaptor costing around £20.

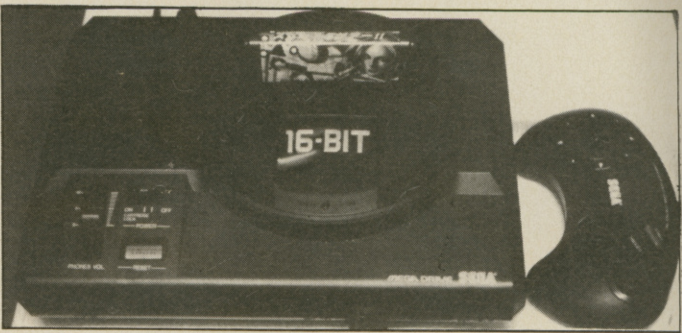
Contrary to false reports elsewhere in the press the machine will be called the Megadrive and not Megadelve. A much touted price point of £140 is clearly wide of the mark.

The machine is being called an "Amiga and ST" beater mainly off the back of its arcade like graphics. Its 64 colour screen has no margin and is capable of enormous sprites. The Megadrive comes with a curious kidney shaped game controller.

And the sound capabilities closely follow those of an arcade machine with three options – Programmed Sound Generator, Pulse Code Modulator and FM.

Cartridges will cost between £30 and £35. Those currently available in Japan include enhanced versions of *Out Run*, *Afterburner* and *Space Harrier II*. There are no plans for third party development of games. Sega operates a tightly controlled policy which excludes all publishers except those with licences.

Sega's products are handled here by Virgin/Mastertronic. Boss Nick Alexander told *Express*: "At best it's very nearly a year away and if we do manage to get it out then it'll cost £200. We see it as a trade up in the range. The biggest problem is that Sega are struggling to meet demand in Japan." In effect, Sega is concentrating on Japan before addressing the European market.



• **Megadrive: £200 next September**

Alexander added that Sega's president Mr Nakayama had ruled out any sub-£150 price. That said, September is currently a long way off and the whole market may be in a different state come the middle of next year, when a final pricing decision would have to be made.

Another possible delay is the problem of converting the console to the British PAL television standard.

Alexander rebutted the notion that this announcement will damage the existing 8-bit machine. He said they would "sit side by side". "When news first came out of Japan we were not desperately pleased. But when we learned that it was more than twice the price and the fact that it won't be here until September, we were less unhappy," he said.

Come next year 16-bit console shoppers will be given the choice between Sega's machine and Atari's console, which will be half the price.

QL's emulator undercuts PCs!

A PC emulator for the Sinclair QL is to be launched early next year at under £100 turning the machine theoretically into the cheapest of all PCs.

Originated by Digital Precision it will be bundled with Version 4 of Microsoft's MS-DOS. The firm is waiting for that to arrive.

Digital is quick to point out that the £100 emulator with a QL will make the machine the cheapest PC compatible on the market.

"It's not going to be incredibly fast," said boss Freddie Vacha, "because the QL has to pretend it is something else." According to Vacha the software based emulator will be able to handle all PC programs.

More info from Digital Precision on 01-527 5493

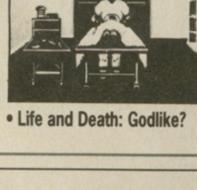
It's the open heart surgery simulator

Just when you thought that every bonkers idea for a computer game had been used along comes, of all things, a hospital simulation.

Californian publisher Software Toolworks has come up with the game which enables you to play surgeon. The firm warns that it involves cutting through "living" flesh and dabbling with organs.

"You make Godlike decisions that determine whether your patient lives or dies," sayeth the blurb. Toolworks' Lisa Dickenson denied that the game isn't entirely in good taste. "Hey, we're not asking people to go around cutting bodies up," she explained from Sherman Oaks in California.

Electronic Arts will probably be publishing *Life and Death* in the UK some time in the new year.



• **Life and Death: Godlike?**

NEW COMPUTER EXPRESS

Atari takes Stacey laptop in hand

Atari's designers and technical supremos have been given the task of completing the £700 ST laptop Stacey by March.

Although the circuit board is up and running, the casing has yet even to be agreed upon. At Comdex two weeks ago a polystyrene model was on display but that is said to be some way off the desired final result.

One problem is the tracker ball which has been drafted in to replace a mouse. Current thinking puts the ball in the right hand corner of the machine – this though would cause problems for that 15 per cent of the population which is left handed.

Speaking at the Atari Show last Friday the firm's boss Bob Gleadow told *Express*: "There's the possibility of a delay because we haven't got the casing yet but the circuit board is ready. All the problems will be ironed out by the international launch at Hanover in March."

Atari is also working on the possibility of expanding power capabilities. Stacey is currently battery powered only, with a life of six hours. However, it is being suggested that an Amstrad PPC solution be brought on – that of running the machine off a car cigarette lighter. "We're also looking at different standards for the battery cells," offered technical director Les Player.

"The case itself is being designed by Ira Vellinski who is responsible for all the ST range's cases. He's a perfectionist," added Player. He estimated that Stacey would weight roughly the same as a 1040's main unit.

• Gleadow: Possible case delay

Stacey tech spec

Price: £695
Launch: International unveiling at the Hanover Messe in March. It should be in the UK later in the spring
Drive: 3.5 inch floppy – exactly the same as the ST
Screen: 640 x 640 LCD pixel super-twist
Memory: 1Mbyte of RAM
Weight: "About the same as the 1040ST"
Power: Battery power, possibly car cigarette lighter and mains power supply.

Job cuts hit Mediagenic

More evidence of problems for United States software houses emerged last week with Mediagenic laying off 30 of its staff.

The firm is blaming the cutback on a squeezing of the home leisure industry in the States. Computer games and toys in general are suffering, claims Mediagenic. This news comes quick on the heels of disappointing financial results posted earlier in the month. Second quarter profits dipped from $1.5 million to $200,000.

The personnel laid off in California represented 11 per cent of the company's staff worldwide. Other US companies experiencing problems include Mindscape, which posted a quarterly loss of $192,000, and EA which has had to close down its Japanese office (*Express issue 3*).

UK boss Rod Cousens said: "We just posted profits but thought it would be prudent to carry this out. The entertainment market is depressed in the States. This marks our consolidation." He stressed that while Mediagenic US is experiencing cut backs the UK arm is still recruiting.

PC SHOW 88: Who went and why

Factoid freaks read on. Here are all the squiffy bits and bobs to emerge from the PC Show which occurred all that time ago. Well, September at any rate.

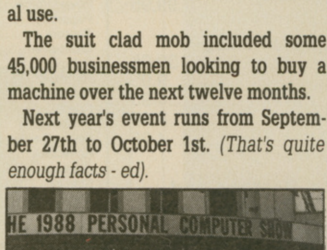
It would appear that there were 99,000 visitors of whom 36 per cent made a beeline for the leisure hall and were interested only in what goodies were lurking behind the razzmatazz stands. A few less, 34 per cent, headed for the sober business hall and kept a good distance from the gaming fraternity.

Geniuses will realise that the other 30 per cent were there to soak up the lot and floated around all the halls.

More than 10 per cent of the visitors didn't have a computer and were seriously thinking of buying one for personal use.

The suit clad mob included some 45,000 businessmen looking to buy a machine over the next twelve months.

Next year's event runs from September 27th to October 1st. *(That's quite enough facts - ed).*



• PCS '88: It figures

Amstrad: made in UK

Amstrad is planning to switch much of its manufacturing operations from the Far East to Britain.

Alan Sugar's firm has saved extraordinary amounts of money in the past by sourcing product from the Orient where labour is a good deal cheaper. The competition for Western manufacturing contracts is so fierce that prices of parts have sometimes verged on the ridiculously cheap.

However, Sugar is looking to hire British sub contractors to build his machines - predominantly his new business range. Amstrad is currently negotiating with new telecommunications combine GPT. If the contract is won GPT could be responsible for up to 20 per cent of all PC2000s.

It will represent the first time Amstrad computers have been manufactured in the UK. Amstrad machines being made in the UK was widely ridiculed as little as 18 months ago when the suggestion was first mooted.

Shoot from the Lip... *the week's most quotable sayings*

"Rose bushes: that's the principle. We've absolutely pruned ourselves right the way back so that we can flower again."
CRL's boss Clement "Greenfingers" Chambers on the right way to save a company.

"Yes, last year we said it would take two years for us to make a big impact on the PC market. But now you have to start those two years from this October because that's when we had proper availability of machines."
An exercise in moving the goalposts courtesy of Sanyo's John Colbert.

"After I've finished Fright Night, *I'll either start up a software development house or buy an ice cream van."*
Programmer Steve Bak putting his plans on ice – either way.

Training blues

According to training firm Computeach companies using micros complain that their biggest recruitment problem is finding computer literate personnel. Yet 20 per cent of those companies don't even train their own staff.

And of those that do, 40 per cent only take on one or two trainees.

Computeach runs a series of training courses aimed solving the computer illiteracy problem.

OUR OPINION

Computer firms: console yourselves

Even by the standards of the hype-obsessed computer market, the new Sega console really is quite extraordinary. We've been lucky enough to get our hands on one and our exclusive report begins on page 8. Judge for yourself the quality of the graphics. Better than the Amiga is an understatement – particularly when you see those graphics in action.

The true sadness is that it won't be on sale until next September at the absolute earliest. For that, blame the excessive demand from the Japanese. (You could also try lobbying Virgin Mastertronic, though that's unlikely to have much effect.) But when it comes, just what will it mean for the keyboard-based games machines?

One view says that the Sega Megadrive will simply wipe the floor with their 16-bit computer counterparts – to say nothing of their effect on those old dinosaurs the Spectrum and 64. If people only want to play games, then give them a games-only machine.

But it isn't quite that simple. Even if the main motivation is games, most people still hope that their machines can do something more than just blast aliens to oblivion. Certainly that's true when it comes to parents, who still nurture beliefs that computers are "useful" for their kids.

For sure the new Sega will do exceptionally well. But its success will be more like the Amstrad Effect, where a new market is created in addition to – rather than as a replacement for – the existing one. Reports of the death of keyboard games computing have, as ever, been greatly exaggerated.

Simply dishonest

Legal niceties prevent us from commenting in detail upon the row that has broken out between Martech and *Commodore User* (see page 6). All that we can say is that *Express* has a clear policy of not being directly critical of a pre-production version of a new title without pointing out that it is incomplete.

Other publications – and we're not talking about *CU* – appear willing to dress up any pre-pro version as a full release, so that they can trumpet having an exclusive. Such practices are quite simply dishonest. Ultimately, they're no good for the punter, no good for the software house and in time – God willing – no good for the magazines concerned.

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Thunderblade

Operation Wolf

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Afterburner

R-Type

KIDS ADDICTED TO NAZI HORROR GAMES

West German computer addicts are playing disturbing Nazi games which include anti-semitic references in a sick new craze sweeping the country.

The illegal disks are being circulated by underground Nazi groups and picked up by home computer users. The games include on-screen swastikas, and players are urged to conquer the world for the Aryan race and destroy homosexuals, Communists and ecologists.

Many war-related games produced here and in the US are banned from Germany, including combat simulations from the likes of MicroProse. But the Nazi titles are being produced in Germany itself and the Government is having difficulties cracking down on distributors.

Parents are being urged to keep an eye on what their children are playing. The games are being aimed specifically at the 12 to 16 year old age group and are apparently the height of fashion amongst young computer freaks.

Two games have been singled out as being particularly offensive. *Clean Up Germany* urges gamesters to kill enemies of the state to the sound of Deutschland uber Alles. And *The Aryan Test* requires taking an exam. Disgustingly, players are graded from being a "wretched Jew" to an SS officer.

This is happening in a climate of increasing violence on West German streets against immigrants and a surge in Nazi activity.

Multi-nationals panic at computer fraud surge

Huge financial institutions are investing larger and larger amounts of money into protecting their PCs as the threat from computer fraudsters and hackers grows ever more.

Last week, multi-national financier Merrill Lynch spent the first $200,000 of a potential $1 million investment on securing its network of PCs. The firm, like many sensitive institutions, has been reviewing its security systems recently and has found them wanting.

One security industry source told *Express* that Government defence and intelligence agencies are experiencing a new surge in panic as more horror stories of computer fraud and hacking come to light. Many reason that for every plan which is foiled, there lurk many more which remain undetected until it is too late, if at all.

"You don't hear about this because companies and agencies don't want their security plans known," commented Louis Oley of security firm Micronyx. "But there has been widespread analysis over the past two years within firms like Merrill Lynch. They are prepared to spend a million because it potentially saves many times that."

Such is Merrill Lynch's angst about being caught unawares that it has bought a substantial stake in Micronyx. Thus, the unusual step of revealing security details was taken.

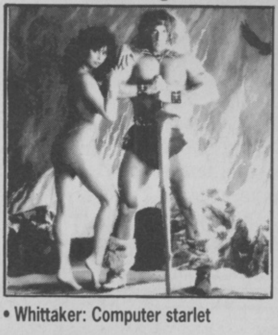
Anco boobs again

Page three bimbo Maria Whittaker has once again popped up in a computer game.

This time Anco, purveyor of the squalid *Strip Poker* series, has signed up the buxom beauty. Amiga, ST and PC owners will soon be able to try their hand against the tabloids' starlet.

Express is informed that the climax of the game – called *Maria's Christmas Box* – involves a G-string.

Whittaker was the centre of a cleverly masterminded puritanical storm of disapproval when she appeared in ads promoting Palace's *Barbarian* game. At the time, at least one publication decided to cover up her most revealing assets.



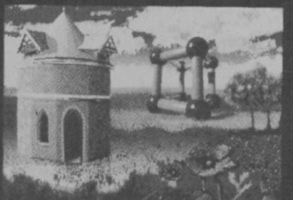
• Whittaker: Computer starlet

Art for Arc's sake

Clares Micro Supplies has just released its *ProArtisan* graphics package for the Archimedes.

ProArtisan – the sequel to *Artisan* – works in Mode 15 and is claimed to make full use of the 256 available colours. Besides sporting all the usual facilities provided by top-end home graphics packages, *ProArtisan* features graduated fill manipulation, true cut and paste sprite scaling as well as Bezier curves for freehand drawing and anti-aliasing.

Perhaps the package's most powerful feature is its ability to designate full screens as complete sprites and distort it into a sphere in less than two seconds. This kind of manipulation, plus the ability to compress screen files by up to 40 per cent, is being paraded by Clare as a good reason to attract those in the Archie brigade with £169.95 to spare. Tel: 0606 48511



• ProArtisan: Manipulation

For 2 points: Does this face look anything like Ian Botham?

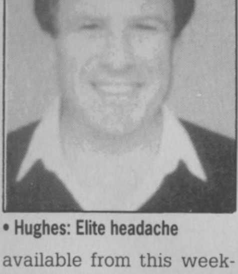
A little problem with Emlyn Hughes had software house Elite in a mad panic last week as it attempted to get *A Question of Sport* out onto the streets.

The game is a month late and last-minute changes have meant that three other games *Storm Warrior*, *Wanderer* and *Supertrux* won't be out until some time next year.

The problem with *A Question of Sport* arose when squeaking panelist Emlyn Hughes was replaced by Ian Botham in the TV game show. Elite had to gain Botham's permission to use his likeness in computer form and then had to replace the digitised Hughes. Sundry bugs have also been cropping up.

"We had to get a licence like this out before Christmas and so the other games have had to wait. The people here have been working non-stop to get it out," said Elite's Jill Birch

Question of Sport was due for release in October. Elite now plans for all computer versions to be available from this weekend.



• Hughes: Elite headache

GAMES TOP TWENTY FULL PRICE

1	NE	Double Dragon	*Spectrum, C64*	MELBOURNE HOUSE
2	1	Last Ninja 2	*Spectrum, C64, CPC*	SYSTEM 3
3	8	Return Of The Jedi	*Spectrum, C64, ST, CPC*	DOMARK
4	2	Football Manager 2	*Spectrum, C64, ST, Amiga, PC, CPC*	ADDICTIVE
5	17	Pacmania	*ST, Amiga, Spec, C64, CPC*	GRAND SLAM
6	4	Out Run	*Spectrum, C64, ST, CPC, Amiga*	SEGA/US GOLD
7	3	Daley Thompson's Olymp. Chall.	*Spectrum, C64, ST, Amiga, CPC*	OCEAN
8	5	Taito Coin-ops	*Spectrum, C64, CPC*	OCEAN
9	NE	Game Set and Match 2	*Spectrum, C64, CPC*	OCEAN
10	7	Supreme Challenge	*Spectrum, C64, CPC*	BEAU JOLLY
11	NE	R-Type	*Spectrum*	ELECTRIC DREAMS
12	RE	Afterburner	*ST*	ACTIVISION
13	20	Elite	*Spectrum, C64, ST, BBC, Electron, PC, MSX, CPC*	FIREBIRD
14	NE	Emlyn Hughes' Int. Soccer	*C64*	AUDIOGENIC
15	12	Track Suit Manager	*Spectrum, C64, CPC*	GOLIATH
16	RE	Airborne Ranger	*Spectrum, C64*	MICROPROSE
17	NE	Lombard RAC Rally	*ST, Amiga, PC*	MANDARIN
18	RE	Starglider 2	*ST, Amiga*	RAINBIRD
19	13	Gold Silver And Bronze	*Spectrum, C64, CPC*	US GOLD
20	RE	Armalyte	*C64*	THALAMUS

GAMES TOP TEN BUDGET

1	1	Joe Blade 2	*Spectrum, C64, BBC, C16, Electron, CPC*	PLAYERS
2	2	Bomb Jack	*Spectrum, C64, C16, CPC, ST, Amiga*	ENCORE
3	9	Commando	*Spectrum, C64, BBC, C16, Electron, CPC*	ENCORE
4	3	Footballer Of The Year	*Spectrum, C64, BBC, Atari 8-bit, C16. MSX, CPC*	KIXX
5	6	Advanced Pinball Simulator	*Spectrum, CPC*	CODE MASTERS
6	RE	Combat Lynx	*Spectrum, C64, CPC, BBC, Electron*	ENCORE
7	10	International Rugby Simulator	*Spectrum, C64*	CODE MASTERS
8	RE	Stunt Bike Simulator	*Spectrum, C64, CPC*	FIREBIRD
9	RE	Kik Start 2	*Spectrum, C64, CPC*	MASTERTRONIC
10	4	End Zone	*Spectrum, C64, CPC*	ALTERNATIVE

COMPILED BY GALLUP

NE – new entry
RE – re-entry

Atari's mega bucks trauma

Atari continues to be dogged by the bad performance of its chain of American shops called Federated.

Though computer sales are increasing Federated is losing the company nearly $2 million a month. Atari - owned by Commodore's former boss Jack Tramiel - made a profit of only $900,000 for the three months up to the beginning of October. That is down 91 per cent on the corresponding period in 1987. Such a shortfall is likely to hamper Atari's ambitious plans across the board for computing next year.

In contrast, arch rival Commodore is enjoying profit increases of 92 per cent brought about by moves up market and internal re-organisation.

Sales of Atari computers increased by 20 per cent during the period, although even here profits were down 20 per cent. Atari, once again, blamed D-Ram prices and shortages for "negatively impacting" profits.

FURIOUS MARTECH TAKES MAG TO COURT

• Martin: Sick as a pig

An angry legal battle has broken out between games publisher Martech and the magazine *Commodore User*. The row could have a knock-on effect on the way magazines review software.

Martech is livid because *Commodore User* has slated its new game *Phantom Fighter* – allegedly without reviewing a completed version. The software house says it only sent editor Mike Pattenden a pre-production demo for preview purposes. The firm claims that this fact was stressed to Pattenden.

Last week Martech took the magazine to the High Court in The Strand with the aim of obtaining an injunction to prevent distribution of the magazine. The judge was said to have been sympathetic but due to the extraordinary costs of pulling a mag the injunction was refused. Martech is now set to sue *CU* 's publisher EMAP.

"We're as sick as pigs about this," raged Martech's boss David Martin. "It's a fundamental breach of trust that you have to have with the magazines. The game was clearly a demo. When they asked if it was reviewable we told them it wasn't.

"I can only guess that Mr Pattenden was trying to be clever. We won't be submitting anything to *Commodore User* while he is editor."

He went on: "This will have relevance to every software house that sends out demos to magazines. We need to feel comfortable about sending these things out." He added that *Phantom Fighter* has been received well by all other magazines including *CU* 's sister paper *The One*, which reviewed the completed version. Aspects of the game which Pattenden had scorned, said Martin, had been ironed out.

What has upset Martin even more is that the game was programmed by an Irish development house, Emerald, which he set up in conjunction with the Irish Government. "This was Emerald's first venture and we wanted to show everyone what a great game it is. They will be extremely angry with this."

Pattenden point blank refused to comment on the matter. Indeed, EMAP as a whole is currently preferring to remain tight lipped.

Kids' mega GCSE trauma

Young ST owners hoping for a good blast-em-up as a Christmas present could be in for a nasty surprise from educational software house Adamsoft.

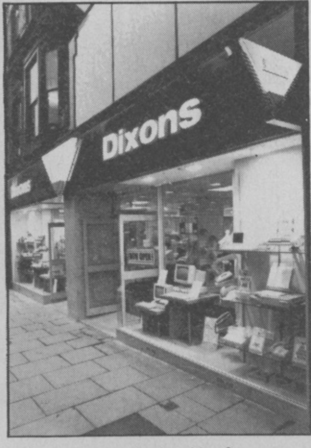
The firm is about to let loose *GCSE Higher Maths* in the hope that parents will consider it a more valuable use for the machine their offspring are spending so much time on. Adamsoft takes it as read that students themselves won't be forking out for the £25 program.

"It's difficult to get youngsters to use educational programs instead of playing games," observed boss David Tomkinson. "But the parents will buy them."

The program was written by a teacher, and Adamsoft reckons it'll give students a better chance of passing their GCSE Maths exam come the summer.

More details on 0706 524304.

Dixons doing the business



• Dixons: Beating the bumblers?

High street chain store Dixons has opened up its first 'business computers only' store in Leicester.

The multiple retailer reckons businessmen have hitherto been served badly when it comes to electronic office equipment. The business centre stocks "everything from the PS/2 range to a desktop fax machine".

And the firm claims that it will be installing staff who know what they're talking about. The high street computer stores in general are notorious for bumbling sales assistants. Dixons personnel promise to pay customers visits when problems occur. Other business stores are set to follow.

357

shopping days to go...

***The last thing most sane people want to start thinking about now is Christmas 1989. But the software houses already have their eye on the games which might be taking us into the next decade. Activision's UK supremo Rod Cousens reckons his firm's in with a chance with* Powerdome. *Posing the biggest threat, he says, will be Ocean with* Chase HQ.**

Snippets

Refreshing ribbons

For those people who disklike buying a new printer ribbon every couple of months comes Refresh.

The £9 aerosol will, according to Caspell Computer Services, change an old faded ribbon into a sparkling new shiny one. And it can perform this feat "over and over again".

Money for old sticks

Joysticks aren't the most resilient of creatures, as any gamer will tell you – and replacing them can be a costly business.

With this in mind Letchworth-based Roebuck Designs has come up with a scheme to recondition bust wagglers. The company will take in any faulty stick and immediately replace it with a fully working model. Then, it will take apart the broken joystick, fiddle around and turn it into working models to send on to the next customer.

"We've got most models in stock and we'll send a fixed joystick off the day we get a broken one through," explained managing director Keith Penhallow. "We got the idea because the son of the boss kept breaking his joystick and it was costing a fortune." The cost of reconditioning your stick is £4.50.

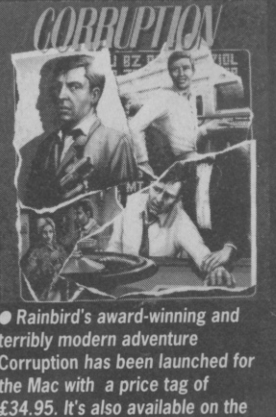
More info on 0462 480723.

Amstrad climbing

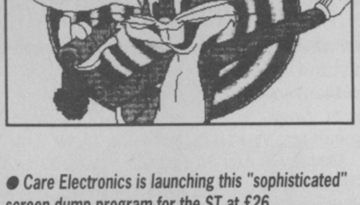
The Financial Times may have brought a smile to Mr Alan Sugar's normally stern face last week.

In the esteemed publication's annual Top 500 biggest Euro companies chart, the Amstrad mob had moved up from number 211 to 170, in the process taking over such notable names as Heineken and Rolls Royce.

However, a look up to the heady heights reveal that Europe's number one computer company is still Olivetti at 81, despite a slip from number 60.

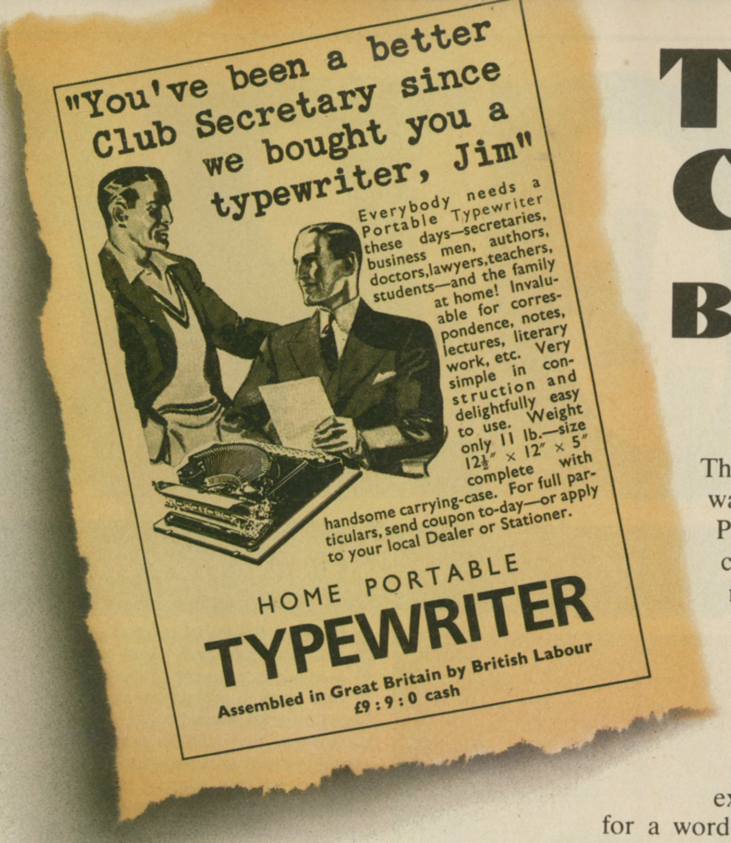


● *Rainbird's award-winning and terribly modern adventure* Corruption *has been launched for the Mac with a price tag of £34.95. It's also available on the Archimedes at £24.95. Rainbird can be contacted on 01-631 5170.*



● *Care Electronics is launching this "sophisticated" screen dump program for the ST at £26.*

Flexidump can dump a whole screen, take a small part of it only, or magnify or reduce specific parts of the screen. The firm says it'll produce good prints on even the most complex game. Flexidump works on Epson-compatible printers. More info on 0923 672102.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TIMES HAVE CHANGED...

But the problems haven't

There was a time when all you needed to create the right impression was a good typewriter. Times have changed since Jim got his Home Portable, but the problems are still the same. From multi-national companies to the local squash club, everyone wants their printed material to be the best.

Until now Jim wouldn't have had much choice. He could do the job himself on his trusty Home Portable - or his word processor - or put the work out to a design studio and have it typeset. And he'd pay the price - with low quality or high costs.

Now there's a new choice. One that gives you the quality you'd expect from a studio, at a price less than some people might pay for a word processor! Timeworks Desktop Publisher turns your PC and printer into an instant electronic print shop.

What's even better is the unique blend of publishing power, versatility, and ease of understanding that Timeworks Desktop Publisher gives you. And there's a Guided Tour tutorial to get you up and running in under an hour! No need for sophisticated hardware either. Timeworks Desktop Publisher works equally well on a 512k twin floppy PC with a 9-pin matrix printer, or the latest 386 PC or PS/2 driving a Postscript laser printer. So you don't need to throw your software away when you upgrade your system.

Jim would have loved Timeworks Desktop Publisher. Isn't it just what you've been waiting for?

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- **Built-in text editor with Search & Replace.**
- **Import text from leading word processors including 1st Word Plus, WordStar, Word Perfect and Microsoft Word, plus ASCII files.**
- **Import picture files - line art or bit image - from GEM applications like Draw, Paint, or Scan, plus PC Paintbrush, Lotus 123, and others.**
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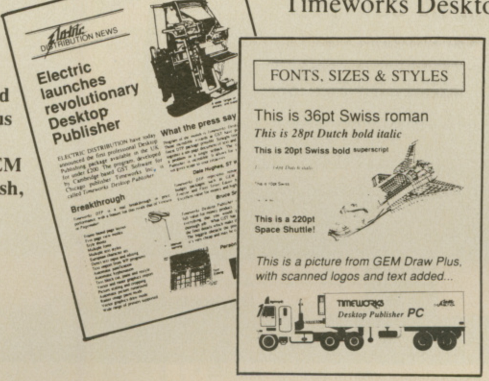
- **Bulletted paragraphs.**


Electric DISTRIBUTION NEWS

Electric launches revolutionary Desktop Publisher

ELECTRIC DISTRIBUTION have today announced the first professional Desktop Publishing package available in the UK for under £200. The program, developed by Cambridge based GST Software for Chicago publisher Timeworks Inc., is called Timeworks Desktop Publisher.

Breakthrough

What the press say

FONTS, SIZES & STYLES

This is 36pt Swiss roman
This is 28pt Dutch bold italic
This is 20pt Swiss bold superscript

This is a 220pt Space Shuttle!

This is a picture from GEM Draw Plus, with scanned logos and text added...

TIMEWORKS Desktop Publisher PC

"To my mind its ease of operation and flexibility probably make this the most powerful DTP package around".
Claire Mainwaring, Amstrad Professional Computing, September 1988

"The software supports all the major features offered by Ventura, plus a few more . . . Timeworks DTP seems to represent remarkable value for money".
Desktop Publishing, March 1988

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Timeworks Desktop
PUBLISHER

Timeworks Desktop Publisher includes the GEM®/3 Desktop.

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NCE

Please send me further information on the Timeworks Desktop Publisher.

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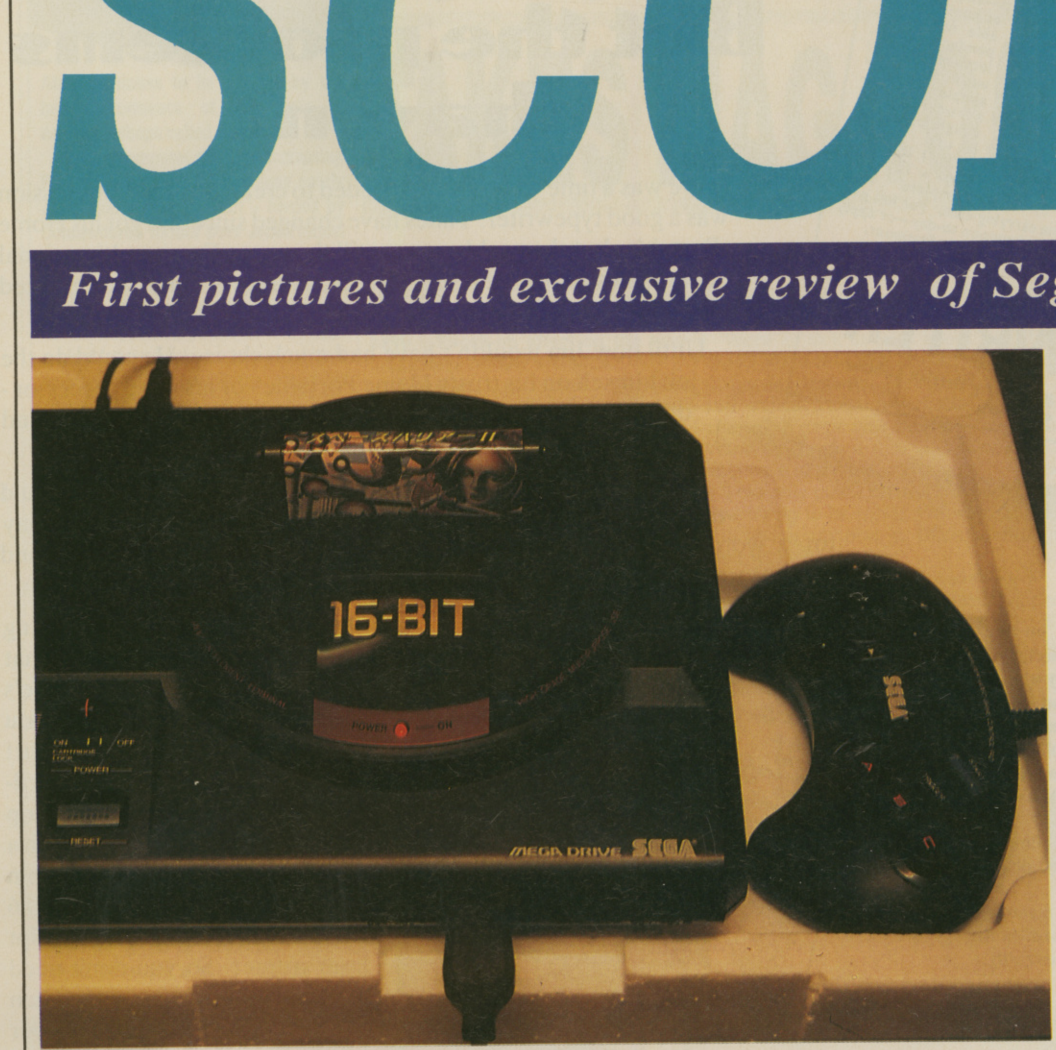
SCORC

First pictures and exclusive review of Sega's sensational 16-



New Computer Express has laid its hands on the *Sega Megadrive*, Japan's first new-wave console. Games freak TONY TAKOUSHI was there at the airport to collect the courier's carry-all, and brought it down to our offices for the first hands-on test in Europe. ANDY STORER helped him unpack.

In Tokyo, the initial production run of the world's first 16-bit console sold out in a matter of days. After two years of project development, Sega Corporation has beaten the likes of Nintendo and NEC to present the cartridge-crazy Japanese market with this designer-chic console not much bigger than a portable CD player.

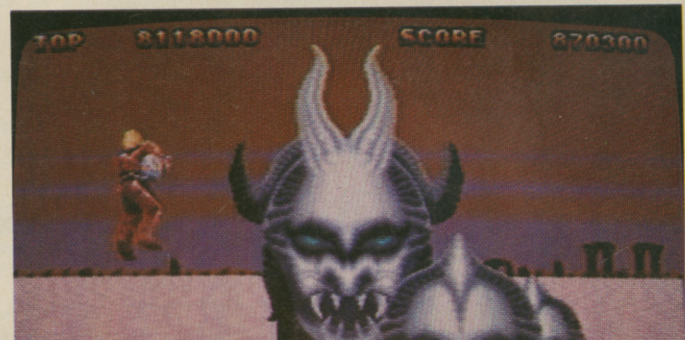
You can hook up the matt-black Megadrive to your TV via its aerial lead and play state of the art arcade action games from your armchair, listening to its digital quality sound through your hi-fi or headphones. It'll take existing 8-bit format Sega cartridges but only after you've paid £20 or so for an adaptor.

The console deck consists of a cartridge port mounted on a thin spherical dome under which is housed the hardware. Bottom left are switches for power on/off, headphone/stereo output volume and RAM reset. Underneath there's a compartment intended for unspecified future expansion – whilst round the back are power input and A/V output along with an extension port. It's also open to speculation what this may be intended for, but it looks like there are enough lines on the interface to support a keyboard, lightgun or 3D glasses. Along the front is a stereo headphone jack and two joystick ports to take the smooth, two-hand joypad control devices – one of which comes bundled.

The lightweight joypad features an eight-way, button-press movement controller on one side with a start/pause button immediately above

Take a look at this software!

Three screens from Space Harrier 2 show what the Megadrive can do.



TOP
8118000
SCORE

CHER!

al 16-bit console

a bank of three fire buttons on the other. Control is extremely responsive and the hand-set designed to fit snugly into the palms.

All you'd really need to go fully cyberpunk would be a neural jack input to connect it to a neck stud, because once you're up and running the world outside stops.

Space Harrier 2 looked more than stunning – we were left wondering how such massive full-length screen sprites could be shifted at ultra high-speeds without any discernible loss in the velocities of other animated objects. Even through RF leads, animation was flicker free.

These impressive visuals aside, the feature which knocked us out the most was the perspective change when the flying character rises into the sky. The ground falls away beneath you and the horizon drops accordingly to give you a true perspective viewpoint. It sounds simple enough, but try getting any other 16-bit computer to handle that information without stalling on speed. Until the unchartered areas of the Amiga's hardware are more extensively explored you won't. The Sega Megadrive is straight out of the future.

Expected to come in at nearly £200 when it hits the UK, it'll probably still sell by the sackful next Christmas – and judging by the Japanese reaction and the quality of the *Space Harrier 2* cartridge we saw, it'll be a winner worldwide too.●

The works

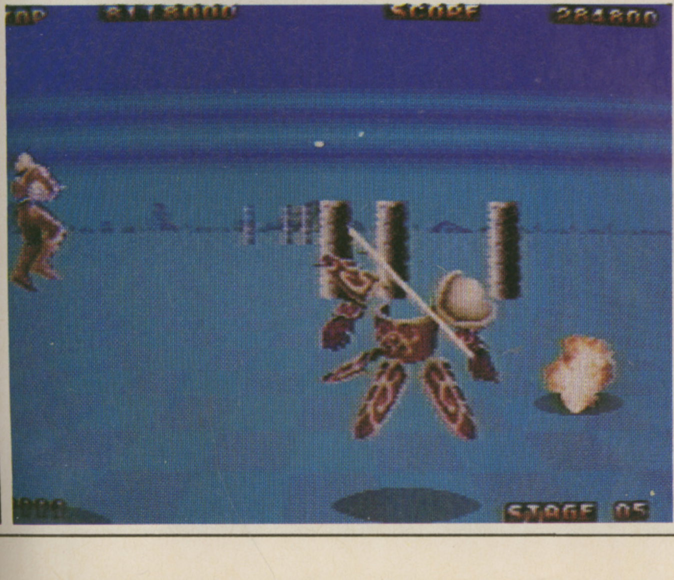
Driven by a **68000** central processor running at **8 MHz** tied in with a **4 MHz Z80** and a huge customised video chip, the Sega Megadrive pumps out a palette of **512** colour, RGB quality graphics. With **64K** of Video RAM, feeding the screen with **64 colours** at any one time, and **FM stereo output**, you have a deck able to deliver all the audio-visual speed and power of an Amiga and more.

How much and where?

Sega's UK distributor, Virgin Mastertronic says the Megadrive will arrive in the UK next **September** and sell for around **£200**.

If you can't wait that long and fancy being the coolest dude on any block outside Japan, you can pick up the Sega Megadrive for only **£85** in Tokyo. The return airfare's about a grand though!

The games cartridges sell for £25 in Japan – at the moment there's only *Space Harrier 2* and *Super Thunderblade* available, but enhanced versions of *Afterburner* and *Outrun* are shortly to be released. By the time the games wing their way over here they'll probably cost you **£30-£35**.



The competition lines up

By next summer, the console war will have really hotted up. Here are the machines the new Sega will be up against.

Nintendo 8-bit System

• Standard Model £129.95
Console, two game controllers, TV connector, *Super Mario Brothers* Cartridge game.

• Deluxe Model £189.95
Console, ROB (Robotic Operated Buddy) robot, light gun, two game controllers, TV connector, two Cartridge games.

• Software
Cartridge ....Around £25
Wide range of games software available in Japan, but only a limited number are released in UK.

• Visuals
Resolution ....256 x 240
Palette 52
Display.................TV Only

• Audio
Sound channels 3
Stereo..................No

Sega 8-bit System

• Master System £79.95
Console, two game controllers, TV connector, *Hang-on* Smart Card game.

• Master System Plus £99.95
Console, Light Phaser, two game controllers, TV connector, *Safari Hunt* Cartridge game, *Hang-on* Smart Card game.

• Super System ..£129.95
Console, 3D glasses, Light Phaser, two game controllers, TV connector, *Missile Defence* Cartridge game.

• Software
Cartridge ....£19.95/£22.95/£24.95/£29.95
Smart Card £14.95
Good selection of games available, usually the best 8-bit conversions of Sega's arcade coin-op games such as *Out Run*, *Afterburner* and *Wonder Boy*.

• Visuals
Resolution ....256 x 192
Palette 64
Display.................TV only

• Audio
Sound channels 3
Stereo..................No

Atari System

• Atari 2600 VCS £49.99
Console, Joystick, TV connector, 5 cartridge games.

• Software
Cartridge ....£10 - £20
Probably has the widest range of console games available, although many games are starting to show their age (most of them produced in 1979-1983). Fortunately a few games are still produced on it – like Epyx's *Summer Games*, *Winter Games* and *California Games*.

• Visuals
Resolution ....160 x 192
Palette 16
Display..................TV Only

• Audio
Sound channels 3
Stereo..................No

NEC PC Engine

Not officially available in the UK, although some retailers are importing RGB monitor versions over here for about £175. No details from NEC themselves as yet.

• Software
Cartridge.............. £25-£30
Only a few games available in Japan at the moment, but they include an incredibly accurate conversion of Irem's arcade coin-op *R-Type*.

• Visuals
Resolution ....320 x 256
Palette 512
Display..................TV or Monitor

• Audio
Sound channels 6
Stereo..................No

Konix Console

Due to be launched early 1989, priced around £150.
Reported to be a 16-bit console with better speed and audio-visuals than the Amiga. Will come with a three inch double-sided disk drive, but will also include the usual cartridge option.

Atari ST Console

Due to be launched sometime in 1989, priced at £99.
Will come without keyboard or disk drive, and will run games software using cartridge format (no ST games are currently available on cartridge).

Amiga Console

Commodore is believed to be launching a console based on the Amiga – no details are currently available.

Nintendo 16-bit console

Nintendo is reported to be working on a 16-bit console, but again there are no other details available.

Chuckie Egg

ARCADE STYLE GAME
from one to four players.
Who'd have thought a country farmyard could be so stressful? You must collect the eggs before the nasties get out and eat up all your corn. Watch out for the crazy duck - if she gets out of the cage, you're in real trouble! You must collect all the eggs to proceed to the next screen. Look out for hidden eggs!

ST, AMIGA OUT NOW

CONTROLS
Select your own keys or joystick. Full instructions included in the program.

GAME PLAY
The game plays over 4 groups each of 8 screens which become progressively more difficult. Survive all 32 screens and the speed then increases to present even greater challenges. The game will play an indefinite number of levels. There is no limit to the high score table!

This classic computer game is now being released for Amiga and Atari ST.
IBM PC £24.95
LOOK OUT FOR CHUCKIE EGG 2.

Enquiries welcome for distributors and bulk buyers.

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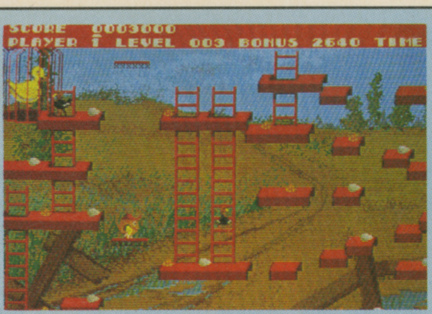
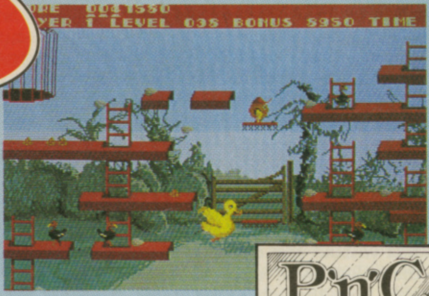


SCORE 0018480
PLAYER 1 LEVEL 020 BONUS 5550 TIME

SCORE 0046120
PLAYER 1 LEVEL 031 BO



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RIPOFF! The savage war against copy-cat software

With Mediagenic's R-Type soon to be released, the firm's boss ROD COUSENS talks to Express's COLIN CAMPBELL about the legal action taken against the game's clones.

EXPRESS: Given that there are so many similar games around, how can you stop people ripping games off? How can you judge a case of 'look and feel'? Where do you draw the line?
COUSENS: You're legislating to something that is in someone's mind. We can look at two similar games and make a defence for one by pointing out the differences. That's what makes it difficult – but you bloody well know that one's been spawned from the other. You can't give up though because you have to believe that in the fullness of time you will be protected. The battle's not been won in other industries but there have been strides forward and progress as been made.

But isn't ripping off simply the unfortunate wages of talent and originality?
Yes, but you can be a lot more receptive to copying if you've been rewarded in the first instance. But if you haven't then you become bitter and twisted.

By stopping games from getting to market aren't you limiting people's choice?
No, it means better choice. Our action against US Gold involved Geoff Brown picking up the telephone and explaining. He regretted it and I think he would admit that. He took the view that Gold, like Activision, Ocean, Telecomsoft, and everyone, have to go out and secure licenses and have to defend them as an individual or by joining with other publishers.

People want *R-Type* because it's an arcade success. It means something to have the title which ultimately you're paying for. I don't think that the consumer suffers in any shape or form. In fact, I think they're spoiled for choice.

What if a small software house had come up with a game similar to *R-Type*? It wouldn't have been able to fight any action brought about by you for fear of going bust?
There is an argument that says the big companies can use the legal system to their advantage in as much as they can chuck money at it. But there is also the view that smaller companies are afforded better protection because the judges are conscious of this. If you bring an injunction against a small publisher just for the hell of it that may work against you because you may leave yourself open to a claim for damages. The larger you are the bigger claim you're exposed to...

• Rod Cousens: "The value's in the original"

If copyright and the question of 'look and feel' is ignored what is the long term damage to games software?
You have to forget the software publishers. It's the programmer's livelihood you have to look at. You may take nine months programming but the thought process may have taken three years. You've produced this work of art only to see it blatantly ripped off under a legal system which is, as yet, far from clear. It denies you a livelihood and that's unreasonable.

You've come up with the most innovative design in the world only to see it ripped off a month later. All that work you've put in and someone bereft of ideas comes along and changes it because they can always improve something after the event. The value's in the original but if that happens to you, you'll say "sod this" and you'll go off and do something else.

That deprives the industry of the talent which we depend on. This is what's wrong and that's why we need to defend them. There are lots of good programmers who can get a nine to five job at IBM but they choose not to because they're creative. But if you're not careful they'll just walk away.

In this industry, which is so creative, we have to defend talent and give it resources. Some kid can walk in off the street with some game. You stick it in and load it up and you say "wow". We need to encourage and protect that. Otherwise, why participate in the software industry.

You've obviously drawn the battle lines and *Katakis* stepped over them. But where are they?
The battle lines are dictated by financial cost. There is little point in us going to court to lose. There has to be a case for it in the eyes of the judge. This can't be done lightly because the legal system won't allow it.

What about the argument that it's too hard to police because there are only basically seven games in the world anyway?
Nonsense. If you jump into a car it has to have a chassis. A game has to have a basic foundation. You build something on that which is different from anything else. That's what makes it original and exciting. When you develop a game you're bound to a basic, say, sideways scrolling. But the theme and concept is entirely different.

If companies are going to start accusing each other of infringing 'look and feel' won't there be absurdities? And won't it become a forum in which to settle old scores?
That could be said but litigation is a very costly exercise. Those that want to fight personal battles by way of scoring oneupmanship through litigation should see that it makes little sense. You must avoid litigation at any cost. That can only be a last resort if there's a breakdown in communications. I don't worry about people going hell bent into court because I don't think it will happen.

What is 'look and feel'?

Software houses have severe problems in arguing that one of their products has been ripped off. The alleged clone will have been produced by different programmers and the program code may well be totally different. So the argument boils down to saying that the 'look and feel' of the clone is very similar to the original.

This is where the dificulties begin. It is very hard to define 'look and feel' and there is no clear dividing line between the ripping off an idea and the developing of an established theme. The courts, in time, will have to decide.

So what is the answer?
People should talk to each other because there is little to gain from litigation unless you're a lawyer. The two sides should talk. We would pick up the phone and say "hey, that's enough."

I did it to Thalamus. In my view the originality of *Armalite* is questionable. I wasn't looking for an argument I just told them to make sure the game wasn't like *R-Type* or I may have been forced to do something. They assured me that it was different enough and I accepted that. We don't want to be facing each other across a courtroom being represented by lawyers. ●

The curious case of R-Type and Katakis

Activision had licensed the coin-op hit *R-Type* and tabbed it in for a pre-Christmas launch. Cousens then found out that US Gold was planning a similar style game for release in October. Activision swooped on US Gold in late September and demanded that *Katakis* be buried immediately. Gold, with a legal gun at its head, complied. *Katakis* was never launched. It has been suggested that Cousens left his attack until the last opportunity in order to inflict the most damage on its rival.
COUSENS: That is absolutely not true. Neither Geoff Brown *(US Gold's boss)* nor myself need to conduct a campaign or vendetta. We're big enough to phone each other up to prevent matters coming to a head. His apparent non response about *Katakis* though was that he was on holiday and so when he came back he was faced with legal action. And that may be.

But we acted before *Katakis* was published. If we'd waited and then issued a writ the Geoff Brown's damages would have been even more substantial. We knew that *Katakis* existed and we looked at it at the first opportunity.

The nub of the argument

If you're planning to buy *R-Type* ask yourself these two questions:
1) Given that *Katakis* and *R-Type* are palpably similar (some would have called them the same game) would you buy both?
2) If you had bought Gold's *Katakis* in September would you be buying *R-Type* over the next few weeks?

Cousens reckons that if *Katakis* had hit the streets at least 20,000 punters would have answered no to both questions. If so, he reasons, Activision would have been deprived of £80,000.

clik -ST

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EXPRESS MAIL

Dear Reader

We proudly present the liveliest, timeliest computer forum in Britain. Write to us about anything to do with computing – just so long as your letters are interesting or angry or opinionated or entertaining or, failing that, short. The week's most impressive epistle wins a mystery prize – we try to make it appropriate for the person concerned.Write to:

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Yours in anticipation,

The Express Editorial Gang

PS. Our replies are prefaced by a tick unless we wholly disagree with what you say. Then you get a cross (and get cross).

PPS. Sorry, folks, no personal replies. We'll print it or bin it.

EAGER FOR AMIGA

I am rather disappointed in your choice of the Atari (blurrrggghhh!) ST as your best buy for this Christmas. I would like to point out that even though the Commodore Amiga costs more, the capabilities make the small extra cost well worth it.

For example, the Amiga has dedicated chips for sound and graphics and has a built-in blitter chip. The ST may be more useful for MIDI applications but the overall quality of sound, without the use of MIDI, is comparable to that of an Amstrad or BBC. On the other hand, the Amiga sound chip's output can be likened to that of a high ranking synthesizer.

The graphics capability of the ST is to say the least sparse, whereas the Amiga is capable of much higher quality graphics (eg the use of Amiga graphics in TV programmes including *Network 7*).

From the above evidence I conclude that though the cost of the Amiga is slightly greater, the overall quality of the machine more than makes up for any material misgivings.

I thus rest my case.

Andrew McMinn, Colchester, Essex

✔*You make some fair points – there's no question the Amiga is an excellent machine. But a major reason we made the choice we did is that the Amiga's technical superiority over the ST is not being fully exploited by software houses.*

The risk in buying an Amiga is that you're paying an additional £100 (only a "small extra cost"?) for facilities which you may barely get the benefit of.

It's the quality of available software which determines the value of a machine for most people.

Having said that, there's evidence of a big improvement in Amiga software support this autumn.

NOT SO EAGER FOR AMIGA

I congratulate you on having the courage to make a definitive recommendation of a wise buy for Christmas.

I agree with your choice, even though I have an Amiga 1000. The ST Super Pack at £399, less discounts available, is an excellent buy. I am hoping to buy a 1040STFM with free business software in the New Year.

If there is a criticism of your very fair comparisons, it is that genuine bargains in Amiga productivity software are now becoming available. And on the ST there is still a lot of development going on in the business area.

For example, The Disk Company has upgraded *Kind Words* to include an English spelling checker plus Thesaurus – still at £50 (for the Amiga). And US software publisher Brown-Wagh has recently opened in London to sell cheap Amiga programs.

Michael Kingston, Littledean, Bristol

✔*Neither machine seems to have a lead in the business market. The Amiga has the advantage of US software, the ST has the lead in European packages. Let the debate continue...*

BORING LETTERS PAGES

Recommending the Atari ST indicates a bias towards same and instantly will annoy Amiga users, prompting the endless stream of "my computer's better than yours" letters leading to a totally boring letters page.

L Winterburn, Harrogate

✔*Good point. Let the debate end here.*

MAIL ORDER DISORDER

I regret I have to inform you of the dangers of ordering software with credit cards. I often order software on my parents' credit cards (with their permission). On November 19th I got my mum to order me *Paperboy* from one mail order firm. The receptionist would not tell my mum how much she was going to debit the credit card. My mum hung up and we ordered elsewhere, but the receptionist could have charged us £50 and said that she had made a mistake.

By the way, I think your mag is "wellard".

Nicholas Crowther, East Cowes, Isle of Wight.

✔*It's true mail order can be an exasperating business. Choose the wrong product from the wrong company, and you can find yourself locked into a lingering battle of letters and phonecalls.*

But that's the exception. The vast majority of mail order firms fulfil their function successfully on the vast majority of occasions. If you apply commonsense when ordering – only choose those with full postal addresses, prefer companies which have been around for some time, ascertain exactly how much your credit card will be debited etc etc – then there should be no problems.

Whatever, if you're having difficulties, then supply us with details and we'll try to sort them out.

HOWARDFISHERHOWARDFISHERHOWARDFISHERHOWARDFISHERHOWA

In your review of eight low cost word processors you included *LocoScript 2* for the Amstrad PCW 9512, but omitted to mention that it is available for the PCW 8256 and 8512 at just £24.95 (or £34.90 including *LocoSpell*).

Your criticism of the lack of word counter is completely false! LocoSpell (included as standard on the 9512) contains a word counter for all or part of a document.

Howard Fisher, Locomotive Software, Dorking, Surrey

PS Why is there no Macintosh column in *New Computer Express*? After all, you use them to put the magazine together.

PPS Memo to Chris Anderson. There was a totally insufficient number of mentions of me in Issue 2!

✔*It's true about the word-counter in LocoSpell, but it would be more convenient to have one included in the main program. And you're right to say that there should have been mention of the solus LocoScript 2 package (even though that DEFINITELY doesn't have a word-counter.) We only left it out so that the name Howard Fisher would have to appear again in this issue.*

Macs: by the logic of the argument, we should also have a column on coffee, alcohol, cigarettes etc – all of which are major aids to putting our mags together.

THANKS FOR THE MEMOTECH

The Reliant Robin of computers has got to be the Memotech. A computer so lacking in software that a special hardware add-on was available – known as a "Speculator" – which enabled it to run a few specified Spectrum games – mostly rubbish.

Its metal case made it heavy and so a wonderful doorstop.

Please send me my mystery prize of a Commodore Amiga immediately.

Don Griffith, London W6

✔*Your special mystery prize is winging its way to you forthwith. Congratulations: it's a Memotech!*

Actually, it isn't. And to be honest, you haven't won the mystery prize in any case. If I were you, I'd never buy Express again after the way you've just been treated.

ART-FELT PLEA

Since computers have been around many, many uses of them have arisen like games, music, education, art, languages etc etc. I think the only two that haven't been used to their full ability are music and art. People complain about games and education fairly often, but as we have seen the games are getting better – think of *Driller*, *Cybernoid*, *Elite*, etc.

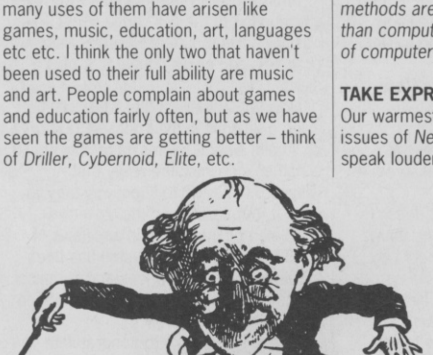
But with music and art, it's different. For example, nearly all (if not all) music programs are written so people can write their own music. Many people don't have the time or patience to do this, but would love to hear music on their computers.

Software houses could easily program music to come out of the computers at an excellent performance for a cheap price. They could even do chart records and have graphics to compliment the music. If brilliant games can be programmed, then surely music and graphics can be. Albums can be sold on disks and tapes.

Also, groups have only just started to have all their music published as scores. Why can't this be in another form or media?

Jason Kelsall, Rotherham, Yorkshire

✗ *Fundamentally, this idea appears flawed. If you want music merely to be played to you, then conventional methods are far better and far cheaper than computers. Why lose the advantage of computers being inter-active?*



• Many people would love to hear music on their computers

TAKE EXPRESS, DROP RIVALS

Our warmest congratulations on the first issues of *New Computer Express*. Actions speak louder than words, and we have immediately cancelled our long-standing order with *Popular Computing Weekly*. It will be quite interesting to note how long you can maintain your (unbelievable) launching price of 48p once you have reached your readership target.

We have two suggestions to put forward.

1. The implementation of a regular adventure column (weekly, bi-monthly, or even monthly) to cover all aspects of adventuring (adventures, D&D,

☞

● WHAT YOU THINK OF US

SHEER UNALLOYED ENTHUSIASM

Mystery
WINNER
prize

I bought your magazine reluctantly, as in the past I have accumulated a vast pile of computer-related mags that started off in the right direction. But as time passed, they not only graduated into mere pages of games reviews, but increased in price regularly until they reached what seems to be a standard price for this type of publication, ie £1.95.

Moreover, the standard of the format and lay-out deteriorated greatly. The indexes were incorrect, page numbers to articles were the wrong ones and pages that contained adverts were not numbered (so that it is difficult to find a specified page). So I decided to cease lining the pockets of greedy and unprincipled publishers.

Another criticism is the quality of spelling and grammar of all publications in the present day. Whilst I am in no way a scholar (I left school at 14 years), I can read and write with reasonable accuracy. I would expect that a publication put out for sale to the public could attain a reasonable standard of the English language, without the many mistakes found in all the printed matter one attempts to read today.

So, having rashly purchased your first and second effort, I offer you these comments in the hope that they will not fall on barren soil! Should the present style and price of your mag stay stable, or indeed improve, I may continue to buy it. The ball, as it were, is now in your court!

To conclude, I wish you every success, and predict that if you follow the aforesaid guidelines, the resulting increase in your circulation will be assured.

Robin Lamming, Hull

✓*Congratulations – you have won this week's Mystery Prize. We were going to send you a free subscription to* Express, *but you might well regard that as a ploy from an unprincipled publisher. Instead, we'll send you a sub for one of our rivals, to show you just how bad life can really be.*

No doubt we've fallen foul of many of your criticisms already. All we can say is sdkm derrog ve;,.da er440 er45f ltph (Cont page 57).

MY TYPE

I think that *New Computer Express* is far better than the others. I have only one complaint: there was far too much space wasted on the *R-Type* review.

Neil McGowan, Goole

✗*This is absurd: even we've got more complaints than that.*

BULLETIN CALL

I must compliment you on the standard of *New Computer Express*. Future Publishing is keeping its standards level with the excellence of *8000+*.

Could I make a suggestion? Why don't you have a regular page devoted to bulletin boards and suchlike? I am sure your readers will appreciate it as much as I would.

Andrew Long, London E8

QUESTIONNAIRE BITS

Here are a few comments and suggestions from the hundreds of questionnaires replies you've sent us.

"Less about Alan Sugar. No – nothing about Alan Sugar."

"How about enlarging the wordings?"

"Keep the print size the same.

"The 'Astonishing Advice from the High Street' in your buyer's guide was really funny. Try having similar articles in future."

"Introduce a Business/Graphics section (ie a 'slightly serious' section!)"

"I like the beginners section."

"I don't think you need to improve it – for the price, you've got the balance right."

"It's good to see the QL area. Despite Amstrad, the QL refuses to lie down and die and it still knocks spots of most other computers."

"More in-depth games reviews for 16-bit machines."

"Less games. There is plenty of mindless dross already for people with negative IQs."

"Apart from a slightly 'over flip' approach which is humourous at first but is liable to become wearing eventually, I congratulate you on a well presented and interesting magazine."

"I enjoyed the quotations in the news section and the 'Hype Springs Enternal' in PSsst!"

"The article on PC Graphics was a splendid example of good journalism."

"Keep things simple. Don't be excessively negative."

"Really go to town on software houses who consistently bring out sexist/violent games."

"Less news type stories."

"Expand your news coverage. It's great."

"I think you have a winner cos it doesn't make my pocket much thinner!"

"Thanks for an excellent value-for-money weekly – far better than the competition.!"

● SPOT THE LINK

MSXist

Well then! Wasn't that a naughty thing to say! About what you printed in the unfeasibly small PSsst! section on page 62 of Issue 1. You said "...I just hope you're right in thinking there's another MSX owner out there to read it."

That was a bit MSXist, wasn't it? As I am the very proud owner of a Sanyo MPC-100 MSX, (but I never use it), I'm always making games on my Spectrum +3 (hire me!).

Before I go, I must congratulate you on releasing such a+%*!?@ brilliant mag, and congratulate Elite on their totally brillo (pad) release on the Spectrum 128, *Overlander*. My hi-score is 12,200.

Ronni Stirling, The Core Cartoonist, Glasgow

✓*The experience of the past few weeks has taught us that there is indeed more than one MSX owner. All 14 have written to us.*

MSXasperated

I'm looking for an address of a firm that sells games cartridges for the MSX by mail order, and wonder if you can help as I can't find a shop in Basingstoke that stocks them.

R. Carpenter, Basingstoke, Hants

✓*Your best option is to scrutinise the advertisers in* Express. *And look out for some major games titles on MSX this Christmas.*

MSXtatic

Perhaps a belated congratulations on your new weekly is in order.
What caught my eye was those three little words MSX (*Words?– Ed*). At last, somewhere to catch up on snippets of news regarding this machine.

Big business, it seemed to me, strangled the MSX so please keep up your columns for us owners and please MSX owners: support this paper for its efforts.

Having got that off my chest let me introduce myself. I'm a pensioner of 69 who only dabbles with a computer to keep the old grey matter working so please don't let your paper get too technical. And don't fill your spaces with those awful abbreviations that we are bombarded with these days.

One last thing. Come on you advertisers. Don't be afraid to say you sell MSX software or any hardware you have.

L Eastap, Street, Somerset

✓*MSX wasn't really strangled by big business, you know. It achieved its own quite spectacular commercial death all by itself. And when you're talking about big business, they scarcely come any bigger than the Japnaese concerns behind MSX in any case.*

Whatever, it's still got its adherents so we'll still continue to cover it. Let's just hope that there aren't too many more MSX letters, or else we'll run out of our supplies of appalling MSX puns.

RPGs, PBMs, etc). Both your weekly competitors have such a feature.

Adventuring may be a minority interest, but it is a dedicated minority interest and we have always been surprised at the large numbers of readers who buy magazines and only read the regular adventure pages.

2. An "at-a-glance" listing of all new releases and conversions would be very handy and time-saving.

HJ Mueller, The Adventurers Club, London NW2

✓*There's no reason for Express to increase its cover price, rest assured. It may well represent quite an extraordinary bargain, but that doesn't mean that we have to irritate the many, many thousands of current readers by upping the charge after a few weeks. 48p it is, and 48p long shall it be.*

One of the reasons for running the questionnaire t'other week was to find out what we're lacking and it is more than conceivable that an adventure column could yet make an appearance. Odder things have happened (like the boss of an adventuring company cancelling an order for a mag with an adventuring column in favour of one without.)

The games listing is currently being discussed. For such a thing to justify its existence, it needs to be definitive both in scope and in content. The trouble with the latter is that it is not unknown for software houses to encounter the occasional local difficulty in getting games out on time...

SIZE ISN'T EVERYTHING

Over the past few years there has been one thing that has puzzled me more than anything else: the 3 inch disk drive. Am I alone in this?

Amstrad surely introduced it after the introduction of the 3.5" drive. Why? This obscure format suffered from availablity problems and costs double that of 3.5" disks.

Now you announce that Konix will be using a 3" drive in their console (*Express* 2). Again, why? It seems incredibly stupid. Is half an inch in space really that valuable? I'm dying to know why they've done it, but it's beyond me...

I'd also be interested in any news of the ST Plus. The Net (Prestel) has been buzzing with various prices and technical specs and a reputed release date of Feb 1st '89, priced at £399.

Finally, I would like to congratulate you on producing two fine issues. I have long been dissatisfied with your competition, and I hope you maintain your quality. Just increase the news, letters and keep the darn advertising to a decent level.

Peter Baldwin, Maidenhead, Berks

✓*One thing you have always to remember about this market is that Amstrad is wholly a law unto itself (and see William Poel's running series for further proof).*

The conventional view is that the firm is little more than a follower where others lead – more of Japanese in philosophy than European. Yet there's more to it than that, and it's called economics. Amstrad's use of 3" drives on the PCW was scarcely conventional (likewise with CP/M, but that's another story). But because the 3" standard had failed Amstrad was able to buy up a huge number of these drives at a rock-bottom price (probably less than $10 each). This meant good news for the price of the finished computers: less good for the cost of the disks themselves.

Thereafter, using 3" drives for the Spectrum +3 had more to do with the firm's over-capacity than it did with any intrinsic regard for the size. It still appears to have been a fundamental mistake, however.

As for Konix, the firm is in the uncomfortable position of not being able to comment publicly on its forthcoming wee beastie, Express's exclusive notwithstanding. Analysis of disk size is thus a little difficult. All will be revealed in the new year.

And then there's the ST Plus. The worldwide exclusive details of its existence, spec and planned prices were first unearthed by a character who now works for Express. Rest assured that those qualities will mean that Express will be first with the news about the Plus. Some pointers: don't hold your breath for February 1st; yes, it's planned to be £399 – with the ordinary STs probably dropping to £299 (bundled) and £199 (standalone); it'll have 4,096 colours and both vertical and sideways scrolling; and it'll feature Amiga-like stereo.

Finally, Peter, yes we will do our utmost to keep the darn advertising at a decent level. That's why we employ an advertising department. ●

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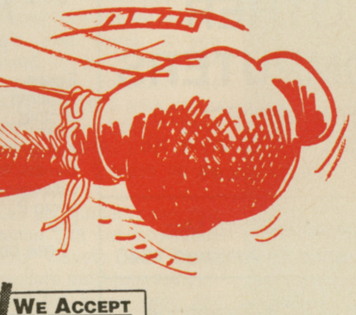

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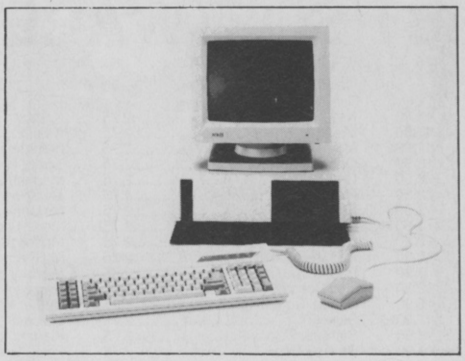

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THE PC SHOPPING NIGHTMARE

You can avoid it with, this exclusive buyers guide to Britain's top-value IBM-compatibles

There are few more difficult tasks than buying a PC-compatible. It's rather like one of those Mensa tests where you have to spot the logical relationship between six confusingly different pictures.

Taken a step at a time, you might be able to choose between 8088 and 8086 processors, 512K and 640K of RAM, between mono and colour displays. But the choices pile up, and manufacturers insist on offering ever-so-slightly different configurations.

How do you choose between 512K and colour, or 640K and mono? Which is better: twin floppy disk drives, or an extra two or three expansion slots? Does a free mouse make up for the absence of an RS232 interface?

When you start to take pricing into consideration, the fog of despair settles and you could be forgiven for simply buying the first machine you find in a High Street shop window.

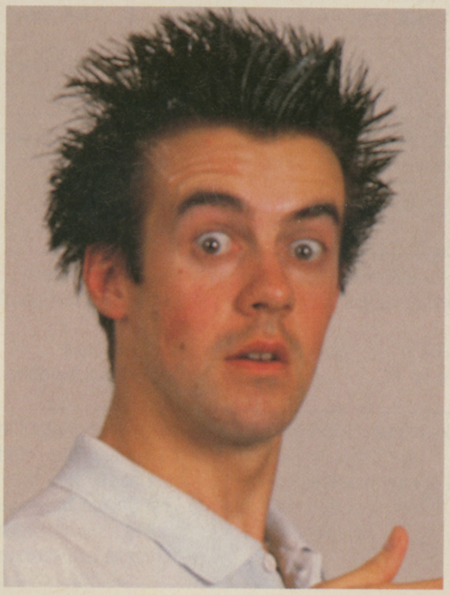
We decided to take a more considered approach.

Cutting through the fog

To help us make a choice on a more rational basis, *New Computer Express* developed a way of rating every commonly-found feature in PC hardware for desirability. By comparing the total desirability rating with price, we were able to determine exactly how attractive each purchase would be.

Not all machines qualified – quite a few failed to meet our minimum spec of 512K RAM, single floppy disk drive, one parallel and one serial interface, and a monitor of some description. Some manufacturers even make you buy the MS-DOS operating system separately (an odd approach to PC-compatibility).

A few more quickly fell by the wayside – would you buy a machine that had half the features of an Amstrad at three times the price? That left a few hundred contenders and these were slowly winnowed down to a shortlist of about 25 machines in some 70 different configurations.



These machines were then awarded ratings in the following categories:

Power	**20pts**
Storage	**25pts**
Display	**15pts**
Expandability	**10pts**
Usability	**30pts**

The sum of these five ratings gives a **Total Desirability Score** out of 100.

There are built-in biases in these ratings: a hard disk is rated more desirable than VGA graphics; the Power rating combines processor and RAM because a slow processor with lots of RAM is as useless as a superfast processor with very little RAM. Usability gets the lion's share of points because it covers a lot of details: built-in interfaces, extras like mice and extended keyboards, and bundled software.

The **Express Value Rating**, or **EVR**, is calculated by comparing the Total Desirability score with the machine's price. The maximum EVR of 10 is equivalent to an imaginary perfect machine (with a total Desirability rating of 100) selling at an unbelievable price of £1,000 (impossible, but then perfection is supposed to be like that).

Six PCs came out remarkably well with EVRs ranging from 7-9. Full details on all six are printed on the next two pages.

The machine which came closest (with an EVR of 9) is a long way from perfection, but then it's also a long way from £1,000. (Incidentally, we estimate on a similar basis, that the Atari 1040ST with colour monitor also comes up with an EVR of 9.)

Take your pick

Choosing your own personal winner depends on your answers to two questions:

How much can I afford?

If you're on a limited budget then the Olivetti or Commodore machines are your best bet. The Italian job has a definite edge, but when you add in the VAT it will cost around £100 more – not much but it could be the deciding factor.

It may seem that there's an unaccountable jump in prices of the selected machines from £400 to £750, but remember our winning machines are based on value for money, not cost alone. If you want a mid-price machine, consider the Amstrad 2086 with mono monitor – pretty good value at £599.

What do I want to do with it?

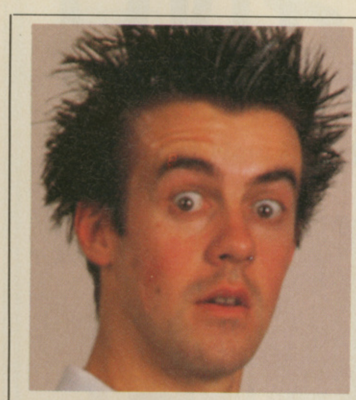
Our six winners cover just about all eventualities. The Olivetti and Commodore machines are perfect for home use; the Amstrad 2086 will handle any application that isn't too demanding; while for tougher tasks – serious business use or heavyweight programming – look at the hard-disk systems, the Elonex and Advent machines, or our only AT-compatible qualifier, the Amstrad 2286.

The big losers

The question on everybody's lips is: what came out as the worst-value machine? A lot of competition here – it could have been the £1,799 Hewlett-Packard Vectra, or the Canon AS2002 at £1,595, or even the £1,695 Honeywell-Bull PCXP. But the hands-down winner is a well-known German manufacturer offering what is almost a cut-down Commodore PC1 for the bargain price of £2,990 – an EVR of 0.9. Let's hear it for Nixdorf!

☞

RATINGS and WEIGHTINGS: a unique

	**Commodore PC1** 	**Olivetti PC1** 	**Amstrad PC2086**
PRICE The list price, ex-VAT, for each model in the configuration described. We have picked the configurations we consider best value.	**£315**	**£399**	**£749**
POWER (rated out of **20**) Covers the power and speed of the central processor and the amount of memory available measured in KiloBytes (K).	● 8088 processor running at 4.77MHz ● 512K memory expandable to 640K on board **3**	● 4.77/8MHz 8088 ● 512K expandable to 640K on board **5**	● 8MHz 8086 ● 640K **10**
STORAGE (out of **20**) What type of disk drives are included. Two floppies are better than one and 3.5" is better than 5.25". Best of all is a large hard disk.	● 1 x 5.25" 360K floppy **4**	● 1 x 3.5" 720K floppy **10**	● 1 x 3.5" 720K floppy **12**
DISPLAY (out of **15**) The graphics modes built in and the monitor supplied for the price quoted. Hercules is high-res mono, CGA is a simple colour (and low-res mono) mode, EGA better colour, VGA best of all.	● CGA adaptor, mono monitor **3**	● CGA display, supplied with mono monitor **3**	● VGA-standard adaptor, hi-res colour monitor **5**
EXPANDABILITY (out of **10**) The number of slots available for expansion cards (such as hard disk cards or modems), and the facility for adding other peripherals. ● No expansion slots	● Capacity for external floppy and hard disks ● Single slot for PC **1**	expansion cards ● 2nd floppy drive, or 40Mb hard drive available ● Colour monitor optional **3**	● 3 x standard expansion slots ● 2nd floppy disk or hard drive **5**
USABILITY (out of **30**) Covers all other features supplied with the machine which improve its versatility.	● 1 x parallel printer interface ● 1 x serial printer/modem interface **11**	● 1 x parallel printer interface ● 1 x serial printer/modem interface ● *First Choice* integrated software package – word-processor, database and spreadsheet **16**	● 1 x parallel printer interface ● 1 x serial printer/modem interface ● Mouse ● Expanded keyboard **21**
TOTAL DESIRABILITY SCORE (out of **100**) The total of all the previous ratings.	**23**	**37**	**63**
***EXPRESS* VERDICT** How it stacks up overall, what it's best functions are, who it's aimed at.	● Rather limited, even in comparison to the Olivetti PC1, Commodore's entry-level machine lacks any internal expansion possibilities, and features the original, slow processor of the IBM PC. However, it's priced accordingly and is almost certainly the cheapest PC-with-monitor available in the UK so if you want bare-minimum PC-compatability without paying much, this is the machine.	● Although technically limited, the Olivetti's low-price makes it unbeatable value for money. The 720K floppy disk provides the equivalent storage of an older twin-disk PC, and the inclusion of the *First Choice* software means you can put it to use straight away. The expanded versions score a slightly lower VFM rating, but if you think you might want colour, you'd be well-advised to buy it immediately – second-hand mono monitors are virtually worthless.	● When Alan Sugar announced the PC2000 series, many observers lamented the lack of an earth-shattering price. But the machines still represent good value for money. The 2086 may not have a super-fast processor, nor the high- capacity hard disk many businesses will require, but it is a capable system and there's the fillip of future-proof graphics. With the 2086 you get VGA at the price many rival manufacturers are asking for EGA.
***EXPRESS* VALUE RATING** Total Desirability compared to Price.	●●●●●●●○○○	●●●●●●●●●○	●●●●●●●●○○

evaluation of six top-value PCs

Elonex PC88C	Advent PCXT 10 Turbo	Amstrad PC2286
£775	£995	£999
● 4.77/10MHz 8088 ● 640K 9	● 10MHz 8088 ● 640K 9	● 12MHz 80286 ● 1Mb expandable up to 4Mb on board 16
● 1 x 5.25" 360K floppy ● 1 x 20Mb hard disk ● 1 x 5.25" 360K floppy 18	● 1 x 30Mb hard disk ● 2 x 3.5" floppy disks giving a total of 2.88Mb of 23	storage 13
● Hercules-compatible, with mono monitor 4	● EGA adaptor, mono monitor supplied giving Hercules-standard display 9	● VGA-standard adaptor, mono monitor supplied 13
● 4 x standard expansion slots 6	● 8 x full PC expansion slots ● Colour EGA option (£200 extra) 10	● 5 x expansion slots ● VGA colour monitor (£150 extra) ● 40Mb hard disk (£350 extra) 8
● 1 x parallel printer interface ● 1 x serial printer/modem interface ● Mouse ● *Gem v3* with *1st Word* and *Gem Paint* 21	● 1 x parallel printer interface ● 1 x serial interface ● Extended keyboard ● 1-year on-site warranty 18	● 1 x parallel interface ● 1 x serial interface ● Mouse ● Extended keyboard ● Windows 286 22
58	69	72
● A business system offering very good value for money. The fast 8088 processor, coupled with the 20Mb hard disk and Hercules-standard graphics make it a good choice for serious word processing and general office use. With this machine you get a compact design that still allows you space for four standard expansion cards. And the software bundle is reasonable (although a more businesslike package wouldn't hurt).	● A fully-equipped business workhorse. Although it's not likely to set many hearts beating with excitement, with a reasonably nippy processor, 30Mb of disk capacity, and either Hercules or EGA colour graphics, it's almost impossible to fault. The one-year on-site warranty will probably convert any doubters among the business fraternity.	● There are cheaper AT-compatibles, and there are cheaper VGA machines, but there aren't too many systems that can give you this standard of computing power at the same price. A machine that will see you well into the next decade.
●●●●●●●○○○	●●●●●●●○○○	●●●●●●●○○○

The D-I-Y Option

You can use our rating system to evaluate any of the hundreds of different PC models available.

Simply compare each aspect of your chosen PC with each of the six listed here and award it the same number of marks as the one it is closest to on that aspect.

For example, if it has one 3.5" 720K floppy drive like the Amstrad PC2086, award it 12 points for Storage. And so on.

By adding up the points you can then determine its Desirability Factor, and by dividing that by the price (in hundreds of pounds) you can come up with a value rating.

We'd be interested to hear of any PC configurations which come out particularly well or particularly badly!

Write to: **PC Comment, New Computer Express, 4 Queen Street, Bath BA1 1EJ.**

Where to buy

If you know what you want, the cheapest way of buying a PC is mail order. Check out the adverts in this magazine and remember you can use the voucher on page 41 to obtain a further £10 discount. If you prefer to buy elsewhere, here are the details.

Commodore PC1 – any Commodore dealer. Call Commodore on 0628 770088

Olivetti PC1 – available through Dixons.

Amstrad machines are available from various dealers and Amstrad Business Centres. Details on 0277 228888

The **Advent PC** is available mail order from Vision (01 688 2654). Likewise **Elonex** is sold mostly mail order – call 01 965 3225.

THE WINNER

The Olivetti PC1 comes out of our survey as the overall best buy.

It's ideally suited to anyone who wants to run IBM-compatible software at home or who's looking for a low-cost entry to the world of PC computing.

But even more important than the make, is the need to make sure that the configuration you buy is the one best suited to your needs.

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The best Amiga wordprocessor?

Ben Taylor assesses Protext on the Amiga, the latest version of Arnor's old WP fave

Too many cooks spoil the broth, goes the old aphorism, and in the past word processing on the Amiga has all too often been a case of lots of colours and fancy fonts but not much attention to the essentials of getting words onto paper.

Protext began life in 1985 on the CPC, migrating to the PCW in '86, PC in '87 and ST in '88. Now it comes to the Amiga with a reputation as a no-nonsense package aiming to deliver text processing wi' nowt tekken out.

User Interface

True to its roots on CPC, PCW, PC and ST, you are faced with a screen and horizontal dividing bar. Above the line is the text you are working on, and below is where you type in any commands such as loading and saving files. Pressing [Esc] expands the editing part of the display to the full screen, whereupon you can get down to the serious business of punching those qwerties.

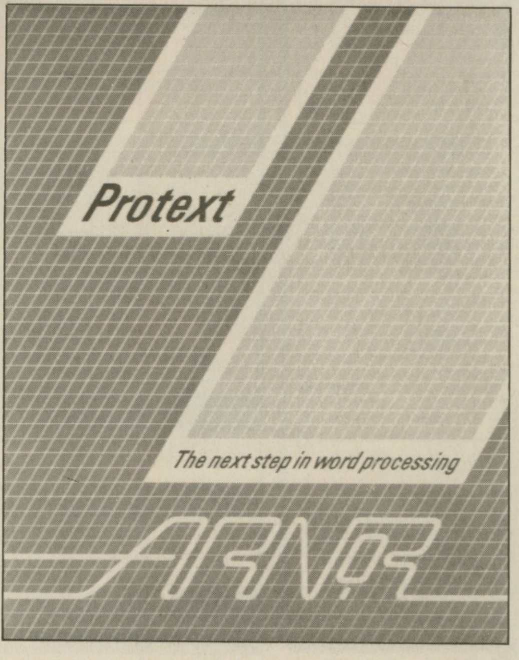
Editing is generally keyboard driven so it's [Ctrl]-M to move a block, for example. However, for version 4 Arnor have also put all the commands on standard menus. The program runs as a proper multi-tasking Amiga application.

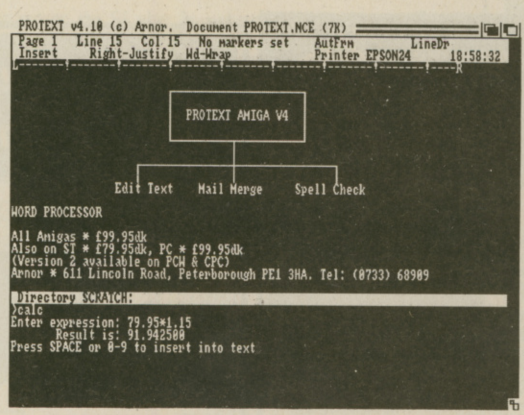
The interface remains unconventional. You can't open multiple windows (although *Protext* has two editing screens anyway); for styles, rather than selecting text and choosing 'Bold' on a menu, you insert special codes in the text. Another oddity is that *Protext* ignores all the Preferences printer drivers and uses its own instead. For better control, Arnor say.

Features

Protext is a word processor that you feel the designers have actually *used*. Of course it's got block copying and moving; of course you can set words in bold, italics and underlined; of course there's a mail merger and spell checker. And they're fast. But what makes it so good are the extras. There's a good 'Undo' and a built in calculator. A unique feature is the 'Box' mode, which lets you to move any rectangular block on screen. Boxes allow you to shuffle columns of tables around or create pages of two- and three-column text – almost DTP-like.

Every command and every keystroke can be stored in a file and executed automatically. You can do things like setting up [F1] to run a string of commands to delete the first three characters of each line.





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• Protext Amiga showing off its line-drawing capabilities in the top half of the screen, while working out a VAT sum below

Other goodies include an ASCII editing 'Prog' mode, and the ability to run any Amiga program from within *Protext*.

Protext's mail merger is very powerful, allowing you to construct complex conditional loops to mailshot only selected people. The spell check lets you choose between three different dictionaries for speed – but spell checking from floppy disk is slow at the best of times. Unfortunately, memory is too low to run the spell checker from within *Protext* on an A500.

Protext lacks the ability to import graphics into text files, nor can it access any of the fancy Amiga system fonts. This, Arnor intimate, is the price of its speed.

Documentation

The biggest complaint is that at present the Amiga manual is a PC manual with a few sheets of Amiga-specific addenda tucked in the back flap. Don't we get our own manual for 100 quid then? Having to weed out the MS-DOS commands is annoying, and the Amiga-specific installation instructions are poor.

On the whole, though, the tutorial sections are clear and there is a good selection of appendices to act as the seasoned users' reference guide. All that is missing is a better cross-referenced index. The menus and n on-screen help system supplements the manual.

Verdict

Protext knows what it does – it doesn't make any attempt to compete with the increasing number of semi-desktop publishing graphics-based WPs. However, if what you want to do is process words, then quite simply *Protext* is the best Amiga Word Processor. But, chaps, why is it £20 more than on the ST?

✪ ✪ ✪ ✪

All Amigas ● £99.95dk

Also on ST ● £79.95dk (limited period), PC ● £99.95dk (Version 2 available on PCW & CPC)

Arnor ● 611 Lincoln Road, Peterborough PE1 3HA. Tel: (0733) 68909

Horses for courses

– How well will *Protext* meet your needs?

• If you're a complete novice on the Amiga, you could be in trouble. *Protext*'s installation process is tricky.

• If you want to be able to use the Amiga special fonts (Opal, Emerald etc.) or import graphics, *Protext* is no good to you.

• But if you're in the business of handling BIG documents or DIFFICULT mailshots, or in fact for any editing task, *Protext* is the only one with the power you need.

• If you're a programmer, there is no better editor on the market.

As a test of its speed, we did a Find-and-Replace on a word occurring 207 times in a 6000 word test file:

Protext	Word Perfect	Scribble	Vizawrite
3.7s	8.6s	35s	655s

HIGHLIGHTS

- **Superfast editing**
- **Powerful 'macro' command language ideal for repetitive editing chores**
- **Comprehensive mail merger and spell checker**
- **'Prog' mode for programmers' ASCII editing**

DRAWBACKS

- **A500 can't spell check within Protext**
- **Can't include graphics or alternative fonts in files**
- **Not friendly to the beginner**

One up on 3.0

The Amiga *Protext* is version 4 in Arnor's numbering scheme. If you've used version 3 on CPC, ST, PC or PCW then there's good news and bad news. The good news is the enhancements:

- Auto reformatting of text (fairly half-hearted though – it doesn't format beyond the current cursor position)
- Menu-driven operation rather than control keys
- Footnotes
- Headers and footers up to nine lines each
- A line-drawing utility to let you add boxes to your text.
- Better printer drivers
- Macro record mode – *Protext* notes what editing keys you press then replays them.

Version 3 has all the features mentioned in the body of this review apart from the ones in this box. The bad news is that if you own a CPC or PCW, you ain't gonna get version 4. Arnor reckon you just aren't lucrative enough to be worthwhile. Shame.

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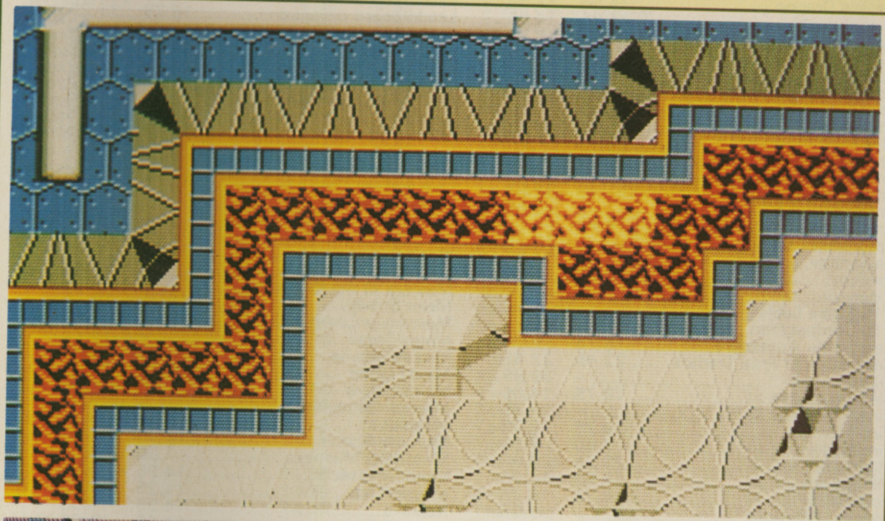
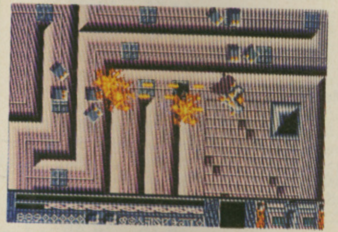
Games meltdown

Seven more releases scurry into the Express *bunker this week, headed by* Fusion *on the ST. Andy Storer dons his radiation suit and sorts the duds from the dynamite...*





FUSION ELECTRONIC ARTS

Showing out on the ST after its well-received debut on the Amiga, comes EA's strategic shoot-em-up, with artwork that should feature in the world's art galleries and insidious gameplay that should keep you busy for days. Find and reassemble the parts of a bomb littered throughout the thirteen levels, and evade five types of enemy hiding beneath silos and bunkers. Then blow everything to bits.

TECHNOCOP GREMLIN

In these 200 mph plus Road Wars, your quest is "to eliminate the filth that are destroying society". Yep – you're a cop. So after driving through endless highways of hairpin bends and steep terrain you'll be only too glad when you receive reports of a nearby disturbance on your wrist-radar and pay a visit to the scene of the crime. Then kill everyone you come across.

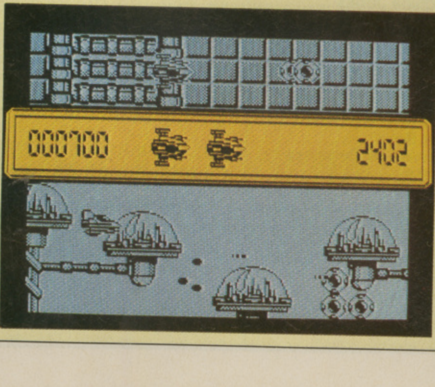
This week's sneak-a-peek...

DRAGON NINJA IMAGINE

Available as a free demo with ACE's next issue is the dual-format ST/Amiga version of this martial arts kick-em-up, and very nice it looks too. Eight levels of aggro-acrobatics will see you attempting to total any bad dude that comes within striking distance.

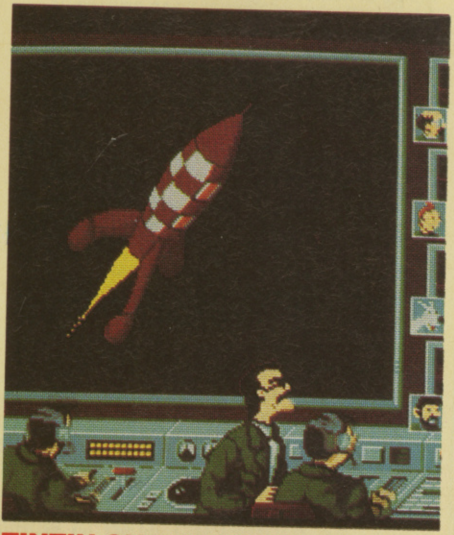
SANXION THALAMUS

Prokofiev hits the Speccy, with music from Romeo and Juliet to accompany this epic blaster – which surfaced a couple of years ago on the C64 and sold quite nicely, thank you. Billed as the *Spectrum Remix*, it's a horizontal scroller in which you get to see action displayed from both side and overhead views simultaneously. Don't be disappointed by the (very early) screenshot – colour should be seeping it's way in there nearer to release date.



GRAIL ADVENTURE MICRODEAL

You take the role of Billot here, a wizard searching for the Holy Grail with Gabo, your friend and servant, in the land of Kabar. Of course, there are many pitfalls awaiting you out there, but gameplay is arranged in such a way as to let you define your own outcome to the story. A fully mouse-operated adventure featuring multi-optional dialogue boxes brings a fair measure of interactivity to the standard text adventure and a whole stack of colourful graphics as well.



TINTIN ON THE MOON
INFOGRAMES

The first licence based on the Herge characters, with you playing Tin Tin alongside Snowy the dog, Captain Haddock, Professor Calculus and the Thompson Twins. Battling the effects of weightlessness, you must pilot your spaceship through meteor storms and hostile attacks and attempt to land amidst the craters of the moon.

AIRBALL MICRODEAL

Believe it or not, this time you're a rubber ball. In a 300-room mansion you have to find a spell book that'll return you to human form again. Unfortunately, though, you have a leak, so you have to locate air pumps on your way and fill up – carefully (fill too long and you explode). Watch out for spikes too! They'll take your breath away. Colourful isometric graphics complete a compulsive adventure for Amiga air-heads only.

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Welcome to *New Computer Express's* games section, the liveliest, most up-to-the-minute reviews for miles.

Here's what we offer that other magazines don't. We:

- make sure more than one person sees each game, so that the verdict can be relied on.
- avoid the shoddy practice of basing 'reviews' on unfinished games.
- break up reviews into easily-digested sections relating to scenario, gameplay, graphics etc. – no more hunting to find out what you want to know.
- take version differences seriously. You'll always know what machine the game's being reviewed on, but we'll give you information about other versions too.
- use a simple, no-holds barred, no-fuss star rating system, where only the very best games get the coveted five-star rating.
- give games of particular significance their own box, together with a flash to say what's different about them.

MICROPROSE SOCCER

MICROPROSE

C64 • £14.95cs, £19.95dk
Due out on PC early '89
Other versions under consideration

Bet you'll never guess what *Microprose Soccer* is all about... Give up? Well it's yet another contender for C64 football sim of the year, only this time, it could actually be the league champion thanks to the talents of the Sensible Software boys – who are also responsible for those other C64 greats: *Parallax*, *Wizball* and *Shoot'em-up Construction Kit*.

● GAMEPLAY

You start off by choosing which type of footie you want to indulge in: Association Football or American Rules Six-a-Side (after all Microprose are a yankie-originated outfit). The major differences in the US version are six-a-side (instead of the usual 11) and an indoor pitch which is reduced in size. There are also differences in the regulations governing play and a slightly faster pace.

Once the game has loaded, you are faced with the choice of Microprose International League, World Cup Tournament, Soccer League, Two Player Friendly, Demo Game, Control Panel or naming your team.

The first four options allow you to decide on how many players (1-16) will participate in the ensuing soccer action. Demo produces a quick look at a game for all those armchair soccer stars. The control panel produces a range of options: manual/automatic (player selection during play), weather conditions (watch out for those lightning bolts), banana kick power (swerve those balls guys), match length (2-12 minutes), replay (switch those slow motion goal replays on/off), mono or colour display, soundtrack on/off and save/load league placements.

When you actually get down to the action, you're placed on an over-head view of the pitch complete with some fancy soccer moves such as the aforementioned banana kick and a truly impressive over-head kick, as you tackle your way through the big match.

● GRAPHICS AND SOUND

It's refreshing to see a new style of graphical representation on a micro-based soccer game (the usual viewpoint being the pseudo-3D side-on perspective), with arcade-quality overhead visuals. Sprite animation, definition and colour are all superb, although there's not a lot you can do with the graphic design of a football pitch!

Audio is of a reasonable standard, containing spot sound-effects ranging from whistle blowing sonics to ball bouncing noises – accompanied by a laid-back soundtrack.

● OTHER VERSIONS

We're afraid other machine owners will have to wait a while, 'cause it looks like Microprose are gonna take their time producing conversions of this one – write in and tell them to get a move on!

5 GAME

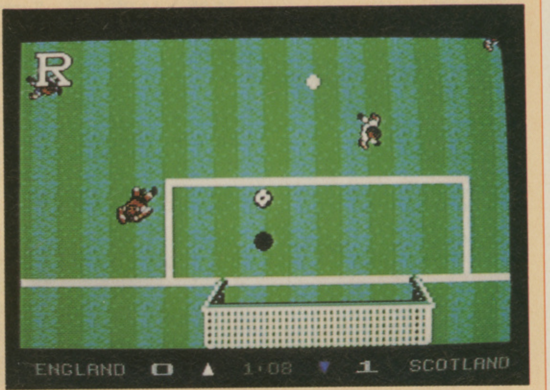
● EXPRESS VERDICT

We believed Commodore's *International Soccer* to be the definitive football simulation on the C64 – until we saw *Microprose Soccer* – now we're not so sure.

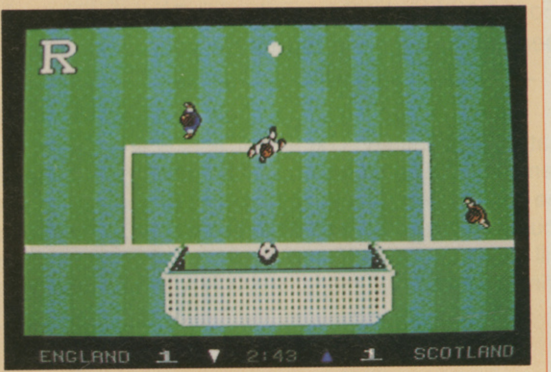
With its hooligan-splattering options, foot-blistering audio-visuals and header-spinning gameplay, *Microprose Soccer* is an essential purchase for any C64 football fan.

✪✪✪✪✪

Rik Haynes



• What's the England goalie doing?

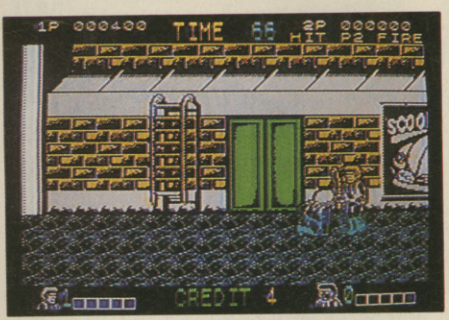


• It's a good job England's got Lineker!

DOUBLE DRAGON

MELBOURNE HOUSE

Spectrum • £9.99cs
Also out on C64, PC
Out soon on CPC, ST, Amiga



• Spec – Domination's the name of the game

***Double Dragon* is a conversion of the immensely playable coin-op beat-em-up courtesy of Melbourne House.**

● VERSION UPDATE

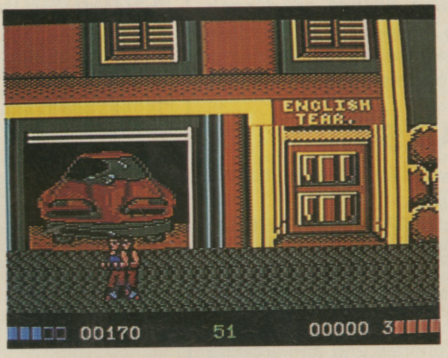
You'll have to take on the scum of the city in a bid to rescue your girlfriend from an evil street gang in this one or simultaneous two-player kick-em-to-death-em-up. You have the usual range of martial arts manoeuvres, ranging from jump-kick to a 'well 'ard' head-butt. As you steam through the opposition you'll meet all sorts of weirdoes, such as whip-carrying women, baseball bat maniacs and massive morons – it's a good job you can use these weapons against them (if you get the chance!).

Visuals give a very good account of themselves – with large, nicely defined and animated sprites and accurate representations of the backdrops. The only flaw is that the sprites are not always clearly visible – fortunately, with the speed of the action you hardly have time to notice. The functional sound-effects are less impressive and limited in number.

● C64 VERSION

Oh dear, the programmers have really screwed up with this conversion. You know something's up as soon as you read the instructions, which includes a snivelling apology concerning the technical faults of the C64 hardware, forcing compromises to be made in the conversion.

In play, the sprites are miniscule and totally out of proportion with the background. There's also a bug which leaves them with a gap in the middle. And these are just minor failings when compared to the awful gameplay – your manoeuvres are completely different to those in the arcade parent. Note to the programmers – try playing the arcade game next time!



• C64 – We've heard of close co-ordination, but this is ridiculous

● EXPRESS VERDICT

Spectrum *DD* is far superior to the C64 version, giving an accurate and exciting rendition of the coin-op's visuals and addictive gameplay. It's got a good balance between playability and lasting interest, so prepare yourself for some martial arts mayhem.

✪✪✪✪

Rik Haynes

PURPLE SATURN DAY

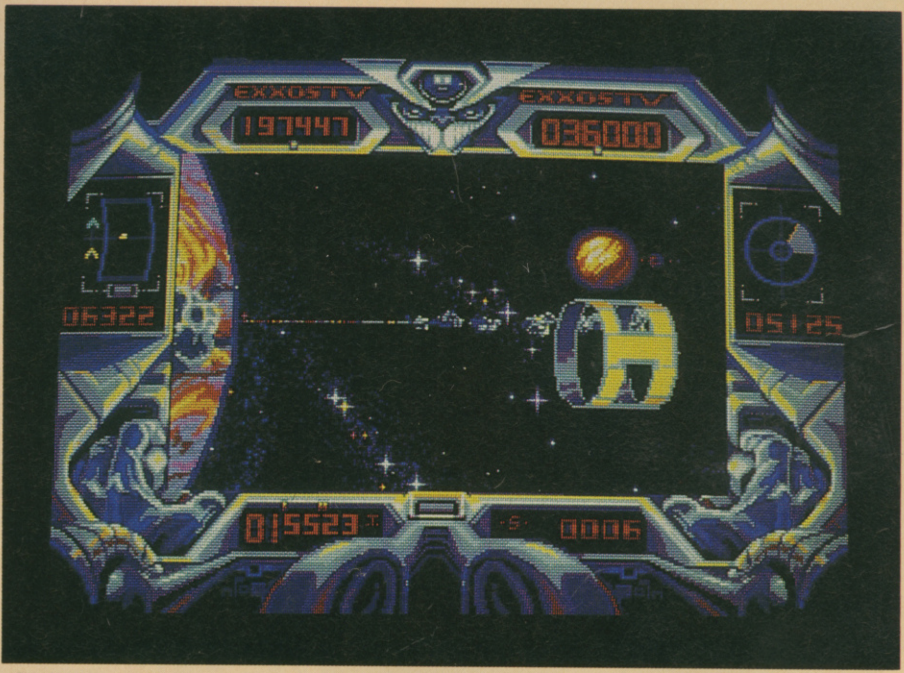
EXXOS
ST • £24.95dk
Due out soon on Amiga

This is the second of six projected releases for the coming year via Infogrames/Ere on their new Exxos label and continues the distinctive graphic work of *Captain Blood*'s Didier Bouchon. As you might expect, the result is bound to look very sexy – and that's before you've even cranked up the volume control.

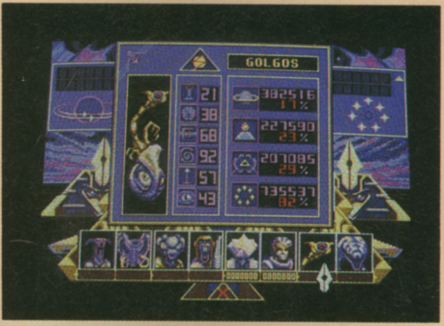
● GAMEPLAY

Purple Saturn Day is a tournament comprising 4 events in which you compete against one of eight aliens in a knock-out series requiring skill, response, coordination and strategy. You may choose to precede each event with training outings against robotic partners or plunge headlong into the venues for the action – somewhere just off Saturn!

Your first opponent is chosen at random from a range of bizarre creatures, including some of the characters to be found in *Blood*. After checking out your opponent's performance in previous events and his/her/its attributes (strength, intelligence,vision, sense of direction etc) you get down to the real business. Playing games.



• Running rings round Saturn as you dodge a passing satellite



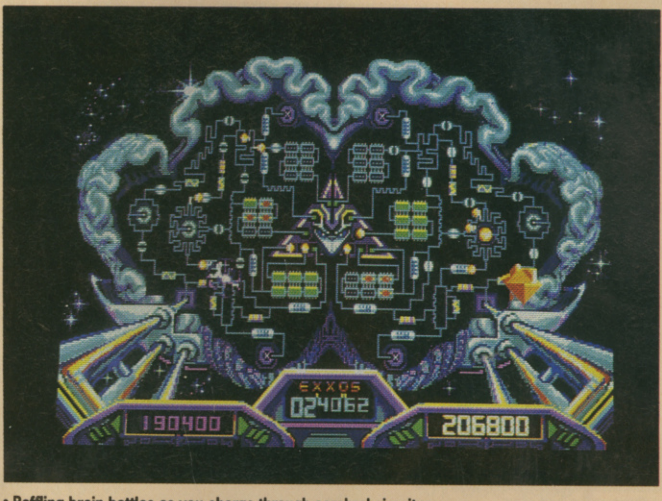
• The attributes of another alien adversary you're up against

Should you choose to try your luck first with 'Ring-Pursuit' you'll find yourself among Saturn's rings, dodging meteorites and satellites as you race against your opponent in a bid to take the lead and thereby score points. Once ahead you can increase your scoring rate by weaving to the right of the red satellites and left of the yellow ones. You move the mouse forward to accelerate, back to brake – though to get ahead of your opponent it's best to veer to the outer edge of the rings and then cut inside for the satellite slalom. After completing a full circuit of Saturn the race is over, your relative scores are noted and it's onto your choice for the next event.

'Tronic-Slider' is set within a four-sided arena where you're in a buggy fighting to gain energy by firing (clicking the left mouse button) at fast-moving energy bolts before your opponent has chance to hit them and thereby absorb their energy. Movement is effected in the same way as in Ring-Pursuit though this time the arena is littered with an ever-increasing lattice of monoliths to compound difficulty. Fortunately, your craft, which the French programmers nicknamed 'the bar of soap', has hyper-manouvrability – just clicking the right mouse button while turning will effect a full 90 degree ultra-fast swivel. This time you're both up against a clock – which is just as well since otherwise you could be mesmerised forever.

5
GAME

Next up is 'Brain Bowler', which is the most taxing of the four events in terms of exercising the grey matter. You're fighting to reactivate one half of an exploded brain by directing 6 charged neural impulses through an intricate cerebral circuit of gates and condensers! By firing at various components in the network to open and close pathways you can direct current to the centre of the brain whilst attempting to sever your opponent's connections and steal energy from supply pods. The action here is at once both combative and strategic and, like every other event in evidence here, so involved it could have been marketed as a game in its own right.



• Baffling brain battles as you charge through cerebral circuitry

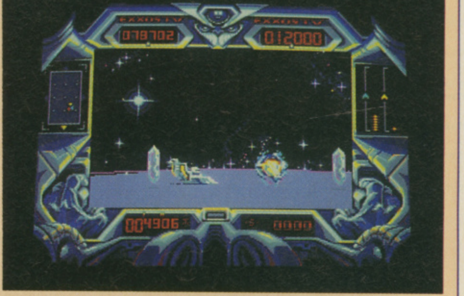
'Time Jump' is relatively (pun intended) straightforward by comparison, conforming to a more traditional shoot-em-up, where you have to blast several series of seven stars as you struggle to control your ship's progress through energy streams in a bid to come first at Temporal Long Jump.

After completing the four events your score is added up and if you beat your opponent you progress to the semi-final stage where you find yourself up against the winner of another contest. By this time you will find you and your opponents' attributes will have been updated accordingly, as indeed they will be every time you subsequently boot up.

● GRAPHICS AND SOUND

One screen surround, that of your cockpit replete with animated finger movements as you control whatever vehicle you find yourself in, links the visuals comprising each event. Needless to say, this is immediately reminiscent of the ship's interior in *Blood* – emphasis is placed on the blue and purple end of the spectrum – with sub-screens either side showing your position and progress, you and your opponent's scores up top, and the event timer down below. Animated action within this screen is spectacular in all events. In Ring-Pursuit for instance, you have simultaneous independent scrolling of three surfaces along with fast scaling sprites.

Sound effects are hot too – with what sounds like digitised spot-effects underlining every collision you come across. Once again, you're left with a top-notch French extravaganza which, and this should be written in six inch high letters, DOES HAVE GREAT GAMEPLAY!.



• Just about to blast the energy bolt before your opponent beats you to it

● EXPRESS VERDICT

Definitely the best game to have arrived at these offices since *Express* was launched, and easily one of the strongest releases of the year, *Purple Saturn Day* offers great value for money. Here you have brilliant graphics, solid sound and diverse gameplay all wrapped up in one great package which would take you a journey to Saturn to master. Yep...it's got insidous involvement. And it'll run rings around the competition on release.

✪ ✪ ✪ ✪ ✪

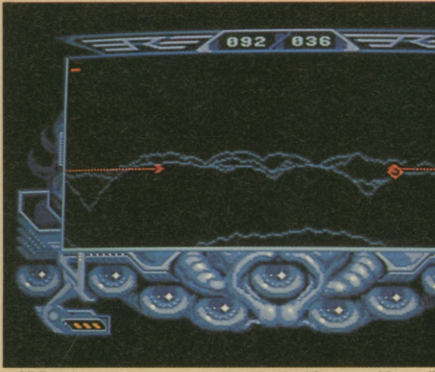
CAPTAIN BLOOD

INFOGRAMES

Amiga • £24.95dk
Already out on ST, PC, CPC
Also on C64
Due out soon on Spectrum

Infogrames' best selling release to date is a intergalactic adventure featuring some of the best graphics and sound available on all formats. It's also rare among exploration games in that it includes conversation with a range of animated characters, involves no violence of any kind, and requires flight sim sensitivity in its aerial sequences.

GREAT GRAPHICS!



• Gliding down a canyon on your way to a rendezvous with an alien...

● GAMEPLAY

You've been cloned thirty times, after you built and piloted a prototype bio-tech hyperspace vehicle that had a small accident off Andromeda. You're after your five remaining clones hidden across the galaxy, and you're wondering which of the 32,000 planets available they're hanging out on. Fortunately, there's 13 types of aliens you come across down on planet surfaces who, in exchange for various favours ranging from destroying worlds to finding them sexual partners, will provide you with the co-ordinates of the next step of your mission.

All operations are mouse and icon controlled. You have a galaxy map and cross-hairs with which to pinpoint a destination, and from there you hyperspace to the selected location and dispatch a controllable surveillance vessel to the planet's surface in order to meet the inhabitant. All worlds require low-level flight over mountains, valleys and forests, and you have to locate a canyon at the end of which should be your alien. Using a system of 120 icons you must attempt to glean information from your host who can be very elusive – your approach has to differ according to the character encountered – and you're never quite sure how much they are hiding from you.

Each new game has a brand new set of inhabited planets, making *Captain Blood* a long, long venture.

● GRAPHICS AND SOUND

After the superb visuals of the ST version you might expect the Amiga's capabilities to enhance *Blood*'s graphics further. But there's not a great deal of difference – if anything the ST's are slightly better – nevertheless you're talking high-quality. The wire-frame animation of the planet surface contours are just as fast, revolving planet and creature movements identical, and the hyperspace and planet destruction sequences virtually identical.

Where the Amiga version scores over the ST, however, is in the sound effects dept. All spot-FX and atmospherics are drastically improved and benefiting from stereo output. Disappointingly, Jean Michel Jarre's intro theme hasn't been lengthened, but what's there is easily the best loading screen music on any game released – (with the exception of the intro to Jinks by GO! on the Amiga).

● OTHER VERSIONS

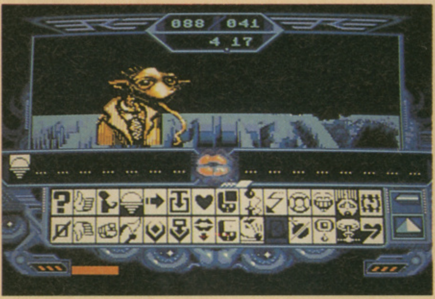
The Amiga version easily out-clones all others – with the exception of the ST, where it's a close finish. The CPC, C64 and PC releases tag along behind, suffering from their relatively poor machine specs – though the C64 version is a very brave effort. *Blood*'s out on the Spectrum later this month.

● EXPRESS VERDICT

Graphically, one of the prettiest releases on any format, *Blood* relies on long-term attention. Once you've mastered the flying sequences and icon communication it's down to solving the cryptic puzzles presented by its alien characters. This can be a long drawn out process – possibly longer than its graphic excellence compensates for.

✪✪✪✪

Andy Storer



• ...and here he is. It looks like he's got plenty to chat about

WANTED

INFOGRAMES

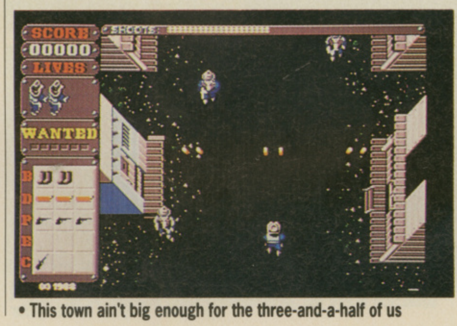
ST • £19.95dk
Also on Amiga

Remember Capcom's *Gunsmoke* arcade game? Well Infogrames obviously does, as their latest release is ever-so-slightly reminiscent of the aforementioned vertically-scrolling shoot-em-up.

● GAMEPLAY

Taking the role of a shooting-tooting, gunslinging sheriff you'll have to clean up the West by wiping out the wanted crims in the area – but the higher the price on their head, the tougher the opposition will be. During play you'll travel through such infamous cliche-ridden Western scenes as the canyon, the railroad and the obligatory ghost town.

Help comes in the form of barrels scattered across the landscape – which, when shot, will give you collectible goodies like extra bullets, dynamite (smart-bomb) and cowboy-boots (speedup).



• This town ain't big enough for the three-and-a-half of us

So hit the shoot-out trail again – but keep an eye on your ammo total or you'll end up feet-first in Boot Hill.

● GRAPHICS AND SOUND

Audio-visuals are best described as simple but adequate – ranging from reasonably well-animated smallish sprites to low-key gunshot sound-effects.

Far from satisfactory is the really awful title page and soundtrack – why bother including this sub-standard trash?

● OTHER VERSIONS

The only other version planned is the Amiga – perhaps the sound will be better?

● EXPRESS VERDICT

Wanted is no more than a simple, although at times annoyingly frustrating, vertically-scrolling shoot'em-up in the *Commando* mould – albeit with a new twist in the scenario.

It's probably worth a look if you haven't already got Microdeal's *Leathernecks* or Elite's *Ikari Warriors*.

✪✪✪

Rik Haynes

TRANSPUTER

CRL

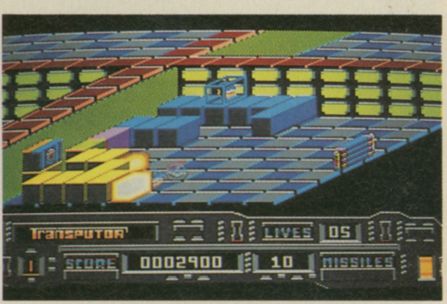
Amiga • £19.95dk
Also on ST

***Transputer* is designed by Clement *Jack the Ripper* Chambers, and is yet another *Breakout* clone, seen with a new (but not necessarily improved) pseudo-3D, isometric view of the action.**

● GAMEPLAY

Transputer follows the standard route of the genre – you knock out bricks using a bouncing ball which is manoeuvred by a bat under your control. You also have a limited supply of missiles which can be used to directly take out the bricks.

Occasionally bricks yield a desirable item such as a larger bat, more missiles or a score bonus. When all of the bricks have been destroyed, you'll move on to the next screen-full, which is basically the same as before...



• You'd be hard pushed to find a worse *Breakout* clone than this

● GRAPHICS AND SOUND

Suffice to say that *Transputer* probably offers the worst colour-scheme of any game this side of a ZX81 release, and is perfectly complemented by the amateurish graphic design style employed.

Audio is the only near-adequate aspect of the game, with short and muffled sampled sound-effects and speech extracts used extensively throughout – so extensively you'll probably grow sick of them after only a few games.

● OTHER VERSIONS

ST *Transputer* closely replicates its Amiga partner – but that's nothing to be proud of.

● EXPRESS VERDICT

Whatever happened to the CRL that produced the classic *Tau Ceti* on the Spectrum? – it surely must be beyond redemption if this release is anything to go by.

The originality of *Transputer* comes in the form of total unplayability, chronic visuals and incredible boredom. There's no point in bothering with this sub-standard release, when you could go for Ocean's *Arkanoid II* on the ST or Microdeal's *Giganoid* on the Amiga.

✪

Rik Haynes

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Ideal for Beginners & Enthusiasts

The editor is fast and easy to use, you can assemble from memory to memory then execute it repeatedly to try your ideas out, all without a disk access. Press a key and you're straight into the debugger, you can even debug programs assembled to memory with their original symbols. No linking is required - the assembler can generate directly executable programs immediately. Interested in hacking somebody else's code, such as the ROM? - with the debugger you can disassemble to disk with automatic labels, including system calls. All programs will work on a 60-column display.

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Handles tabs as single chars	Y	N	N	Y
Step through assembly errors	Y	N	N	Y
Automatic backups	N	Y	N	Y
Integrated assembler	Y	N	Y	Y
Integrated debugger	N	N	Y	Y
Macro parameters	10	10	9	36
Multi-line macro calls	N	N	N	Y
Conditional assembly	Y	Y	Y	Y
Case flexible	Y	Y	N	Y
Local labels	N	Y	N	Y
Executable, relocatable code	Y	N	Y	Y
Linkable code	Y	Y	N	Y
Multi-SECTIONs	N	Y	N	Y
INCLUDE binary files	N	N	N	Y
Assemble to memory	N	N	Y	Y
Stand-alone assembler	Y	Y	N	Y
Section types	Y	N	N	Y
Debugger supplied	Y	N	Y	Y
Disassembler	Y	N	Y	Y
Multi-window	N	n/a	N	Y
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Single-step	Y	n/a	Y	Y
Breakpoints	Y	n/a	Y	Y
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Full expression evaluator	N	n/a	N	Y
Multi-screen	Y	n/a	N	Y
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Example program source code	Y	Y	N	Y
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Figuring out the phenomenon

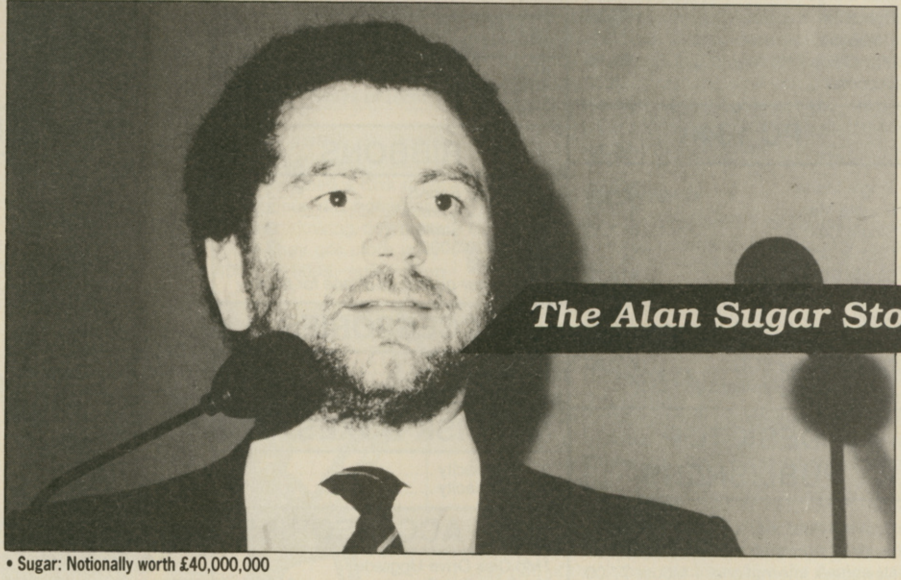
Part two: William Poel reveals the financial secrets at Amstrad

Although it's difficult, in this instalment I'll try and separate Amstrad from the man most perceived as Mr. Amstrad. It is unavoidable that the Amstrad story revolves around Alan Sugar, but there is another facet to the way the company grew and developed in the years up to the encounter with their first home computer.

Amstrad was founded in 1968, and went to the Stock Market in 1980. This is a pretty good amount of time for an organisation to learn the hard way. With a turnover based on organic growth (i.e. not much borrowing) of £9m in 1980, Alan Sugar decided to cash in a few of the chips. There was, though, really no good reason to do so.

I guess the lure of the cash was hard to resist, as Alan Sugar has never been anyone's idea of a workaholic, and has always maintained a separate and very private life. But only around 20 per cent of the issued share capital was placed in the hands of the public. Alan Sugar kept hold of most of the stock for himself and only sold some 25 per cent in the first place, subsequently watering down to 50.66 per cent at the end of the 84/85 year.

The popular view is that 35 per cent of a public company held in one place represents effective voting control, and only a lunatic would choose to vote against the wishes of the founder of an enterprise where the founder was the enterprise. But it does happen occasionally.



The Alan Sugar Story

• Sugar: Notionally worth £40,000,000

Slaughter the goose?

The current Amstrad accounts indicate that shares held by Alan Sugar (in his own name) account for some 249m of a total of 556m paid up. This is only 45 per cent, so theoretically, the shareholders could now gang up and slaughter the golden goose on a show of hands. This is unlikely, and one of the reasons for this gradual dilution is reputed to be a desire by the City to see the guaranteed autocracy of Alan Sugar somewhat less guaranteed as evidence of his good faith in the way the City works. And pigs may fly.

Should Amstrad ever become the target of takeover rumours, many of the gamblers in the City would stand to make a fortune, as the company is languishing with probably the lowest value rating – based on historic performance and that wonderful thing called 'track record' – of any share in the world.

For many years, Alan Sugar did not extract his entitlement to dividend, and waived this possibly huge drain on the company's resources. This act of magnanimity went a long way to pacifying the shareholders who have historically received only a meagre dividend from Amstrad, settling instead for capital growth as the share price generally doubled on an annual basis.

So although the company may have earned 12p per share in 1985, it only distributed a penny or so to the shareholders, the rest being retained. And using this tactic, Amstrad has ploughed its money straight back into the business to fund its startling growth. Amstrad tops the league on turnover per employees and return on capital employed over the past few years, and those are the best measures of entrepreneurial skill and enterprise of all. Any clot can earn £100m with shareholders' funds of billions...just stick it in a building society.

In examining the company, it's also worth observing that Amstrad pays its managers (relatively) very little in the UK published accounts. A public company is obliged to list the 'emoluments' of its higher paid employees in the published accounts, so it is interesting to see that in the 87/88 period, Mr. S. took home a meagre £130,000. Which although some of you may find hard to digest is absolute peanuts for a company of the size and profitability of Amstrad. However, his technical slice of the wedge from his shareholding was £40,000,000, so he ain't on his uppers just yet, John.

Other directors were paid in the region of £60-90K according to the UK accounts. Again, bolstered by share options, but otherwise rather modest by industrial standards.

Flying in the teeth of wisdom

In fact, Amstrad has a well-earned reputation for paying its staff rather modestly, as Alan Sugar believes that well disciplined 'low fliers' are more useful as the soldiers in his organisation than properly rewarded, talented (and highly mobile) whizz-kids. This philosophy is largely proven to be correct by results, but probably another of the reasons why the City regards him with suspicion. This is not the conventional wisdom.

This philosophy is also encouraged and endorsed by his fellow directors, and when he was once faced with the task of hiring a couple of new faces at rates perilously close to those being paid to his existing lifers, he was obliged to construct a scheme to make the apparent salary being paid rather less, in order to keep the old guard happy. And we are not talking seriously large sums of money here, I know, because I was one of those new faces...

But however irritated an observer can get at the frustrations of being close to Amstrad and watching what many perceive as opportunities being wasted (the PPC is my pet frustration, so near and yet so far off the mark), the fact remains that on balance Amstrad delivers, and is now doing so with the inestimable buffer of parallel operations around the world.

Amstrad can't get it right all the time, and Mr S. does not want to have the same sort of mouthpiece mechanism that more conventional public enterprises can employ to apply the vanishing cream to the warts (it's called PR), the Amstrad gets unfairly exposed as the bad news is always more interesting than good news. Particularly when the proportions are so heavily weighted in favour of boringly good news. ●

Growing up in public

When a company 'goes public', part or all of its shares are offered on the open market, and the proceeds of the sale go (in theory) straight into the pockets of the private shareholders. Most flotations also manage some form of 'rights' issue, where the number of nominal shares is increased. If the existing shareholders choose not to buy these new shares, then the cash goes into the company's coffers for 'expansion' and other bullish-like City-speak.

Dialogue of the deaf

For someone who can charge from 0 to furious at the drop of an aitch, The City is a red rag to Alan Sugar. The relationship between the two parties is at best distant. The City slickers regard Mr S's outfit as a phenomenon that they can't quite believe and certainly can't at all understand. From his penthouse in downtown Brentwood, Sugar is derisory about the incessant yo-yoing of his firm's share price, and incredulous of its being so low – even when The City reckons it's so high.

For sure, Amstrad presents the occasional City talk-in to persuade the pin-striped gamblers of the Square Mile that it really doesn't eat babies, boil rivals, drop nuclear bombs etc etc. Equally, Sugar has tried to raise his public image via appearing in the Department of Trade & Industry's Europe Open For Business campaign.

The effect is minimal. The City can't quite believe that the one man band Amstrad can continue being successful. The one man band himself can't quite believe that The City can get it so wrong so often.

NEXT WEEK:

He should be so lucky

Just as Alan Sugar's Amstrad was about to launch itself as a computer company with the CPC, so the rest of the market was variously set to nose-dive. Back in April '84, Sinclair, Commodore, Acorn and Atari were just months away from disasters which very nearly killed off all of them. The great computer adventure was just starting...

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The power of Babel

Peter Worlock probes the problems of incompatibility...

Why can't you take a program for the Commodore 64 and run it on an Amstrad CPC, or a Spectrum, or an Amiga? After all (goes the argument), you can play the same video tape in any make of video recorder, and you can play any music album on any make of hi-fi.

Life with a computer would certainly be simpler without these considerations of compatibility. But, far from improving the situation, manufacturers and software houses are currently making things worse. How many Atari ST owners have bought a program, only to find it won't work with their mono monitor? In the PC world, owners of newer machines with 3.5" disks are having to shop carefully, since most software comes on 5.25" disks. More than a few Amiga owners must have bought *King of Chicago*, then discovered you can't run it without two disk drives.

But the reasons why you can't use software on different makes of computer are purely technical, and fall into four categories.

Processors

The processor is the heart and brain, or the command centre, of a computer. It is physically constructed to carry out a relatively small number of instructions that do little more than move numbers from one place in memory to another, or to do simple arithmetic with those numbers – usually adding and subtracting, but also multiplying and dividing in more advanced chips.

The first problem is that every different kind of processor only understands the few instructions it is built to understand, and every processor understands a different set of instructions.

This means that the 6502 chip in a Commodore 64 or BBC Micro cannot understand the instructions for a Z80 chip in a Spectrum or Amstrad CPC.

Both the 6502 and Z80 are 8-bit processors; that is, they handle information in chunks of eight bits, or one byte. Once you move up to the Atari ST and Commodore Amiga, there's another difference. These more recent processors are 32-bit chips – they handle information in chunks that are four times as large as those in 8-bit machines.

However, that only explains why you can't use 6502 programs on a Z80-based machine, or on computers like the ST and Amiga which use the 68000 processor. It doesn't tell you why – since they share common processors – you can't use the same program on a Commodore 64 and BBC, or on a Spectrum and an Amstrad PCW, or on an ST and Amiga.

The next level of difficulty lies in how the computer loads the program from tape or disk.

Storage

Computer designers, being only human, like to think they've come up with the best way of doing something. Of course, they share a lot of the same ideas: disk is better than tape, for example. But how you make use of these different technologies is up for grabs.

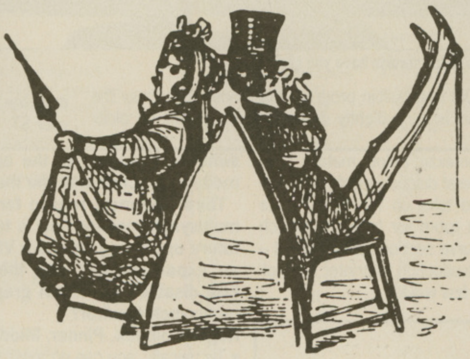
So Commodore's designers decided that the best way of handling tape cassettes was to produce their own recorder, and build a special interface so that the computer could drive the recorder. This was slow but reliable, but it also meant you couldn't use an ordinary audio cassette player with the C64.

Sinclair's designers, on the other hand, decided it would be better if people could use their ordinary cassette players, so they built the Spectrum to that standard.

That's one reason why you can't even load information from a Commodore tape into a Spectrum, and vice versa.

Another reason is that the designers came up with different – and incompatible – ways of recording the information on tape.

When everybody made the switch to floppy disks, the same old prejudices came along too: our way is best. So when Apple designed a disk drive for the Macintosh, the designers did something very clever: by speeding up or slowing down the rate at which the disk spins, they got more information on each disk – 400K or 800K, rather than the 360K or 720K that ST and Amiga owners get off identical disks. But it means you can't read a Mac disk into an Amiga, or an ST, or anything else.


• Considerations of compatibility

Everything is mutually exclusive.

But suppose you find a way to get a C64 program into a BBC, or an Amiga program into an ST. The instructions are in, and the processors understand the instructions. Why won't it work now?

Memory maps

We've already seen that processors are more or less glorified post offices, picking up numbers and stuffing them in memory addresses. When you manage to load a program for one machine into another it's as if you had sent the mail for one town, Atariville, to its near-identical twin Amigaville. All of the addresses look the same, and the post offices work in exactly the same way.

So when the Atariville post arrives in Amigaville, the post office doesn't notice anything wrong and starts zinging the mail to the appropriate addresses. Only then do the problems start because although the two towns look identical, the addresses are occupied by different people. In Amigaville the bank is in the High Street but in Atariville it isn't. The mail goes to the right address but it reaches the wrong people.

In our real computers, the problems are identical. The 68000 processor in the Atari will read the instructions for the Amiga and start stuffing numbers in the right memory addresses but in the ST they have a different function. The result is that the computer crashes instantly.

In other computers the problem can be magnified. For example, the Commodore 64 has 64K of memory, or just over 65,000 memory locations. The BBC has only 32K of memory, so if you try to run a 64 program in a BBC, the chances are the processor will be trying to put numbers into addresses that don't even exist.

Special hardware

Finally, let's take the problem to its ultimate conclusion. Suppose you overcome the memory problem. Your program only uses instructions that are identical in both processors, and only addresses memory locations that exist and perform an identical function in both computers. Now why won't the program work?

But it will. You've cracked it, all problems solved. Except one: your program won't do anything interesting. At best it might display ordinary text characters on the screen, but it certainly isn't going to produce dazzling graphics, or great music, or even print out a letter.

As our demands for better software have increased, computers have had to become more complex. Faster processors, and more memory are only half of the story: machines like the Amiga use very powerful hardware to produce their sound and graphics. This special hardware has to map into the computer's memory, but it also requires special programming. Indeed, the chips that produce the Amiga's graphics and sound are almost miniature computers in their own right.

This is the ultimate cause of incompatibility between different computers, and the reason why the comparison with video recorders, or hi-fis, isn't really fair. Yes, you can play the same video tape in different recorders but you only see the same movie. The reproduction might be a little bit better, the sound a fraction clearer, but it remains the same film.

With computers that isn't the case. When you run, say, *Starglider* on your Spectrum you're playing a game that is vastly different to *Starglider* on the ST. It's as though two different video recorders played different versions of the same movie: on one you get a cast of thousands, breathtaking photography, and the full orchestra; on the other you get the three main characters, a flickering black and white screen, and a solitary banjo playing the score.

What you lose in compatibility, you gain in product quality. ●

Centronics • Parallel

Technobabble

A weekly assault on computer jargon

● After RS232 (see last week) the next most-common 'standard' method for connecting your computer to other devices is the parallel printer interface.

● RS232 is a serial interface: it transmits information one bit after another, serially. As its name suggests, the parallel interface transmits bits of information together, side by side. Originally this made it faster, although it has been overtaken for speed by very fast serial interfaces. It remains much simpler, however.

● With RS232 there are a lot of variables – devices have to agree on how many bits of data make a single chunk, how errors will be notified, how fast the data is moving, and so on. Parallel needs none of this: just plug in the cable and away you go.

● Or not. Because like all computer 'standards', parallelism is nothing of the kind. Perhaps worst of all, it's a genuine 'almost standard': 99 times out of 100 you can be confident that things will work as they should, but you can never be absolutely sure.

● There are some parallel printers that won't work with your Atari ST parallel printer port because the ST doesn't put out enough power to drive the interface at the printer end. Similarly, some parallel printer cables won't work with the Amiga because the Amiga puts out voltage where the cable doesn't expect it. The result is a dead cable.

● Furthermore, the industry tends to use Centronics and parallel as synonyms. They aren't. In fact, you rarely come across true Centronics interfaces any more, but if you do find a genuine Centronics printer, it almost certainly won't work with your computer's parallel port. Worse, there's no way to tell by looking – you have to plug everything together and hope nothing dies.

● As always, the only way to be sure is to insist that your dealer proves that a computer, a printer and a cable will work without problems – before you hand over your money.

Obsolete ST?

A few months ago I bought myself a second-hand Atari 520STM and the person who sold it to me said that it would run both old and new games without trouble.

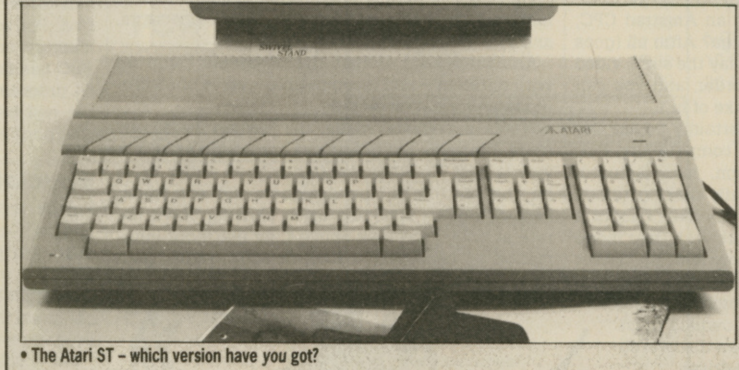
Is this so, and what is the difference between the old and new languages used in these computers?

Do you think I should sell my old ST and buy a new one?

J.G. Stokell, Seaham, Co. Durham

• On all new STs, Atari substituted a new version of the operating system ROM (the built-in program that controls the way the ST works). This is very slightly different to the ROMs on older STs – including yours, Mr. Stokell – and will present some difficulties with software that bypasses the ROM routines.

However, this works to your advantage. People who buy new STs will encounter more problems than owners of older machines, since all software is written to work with the older models. So you don't have to worry. If you have any doubts, simply get an assurance from your dealer that he will exchange any programs that don't work properly.


• The Atari ST – which version have you got?

The second part of your question, I assume, is about the newer version of Basic which is supplied with the ST. In this case, the change works against you. The original Basic supplied with older STs was a real dog, and Atari only got round to fixing some of the worst problems when it released the newer version free with new STs.

To answer your final question: no, there's no need to get rid of your existing ST, but if you want to program in Basic you'd be well-advised to buy a product like *GFA Basic* or one of the variants of *HiSoft Power Basic*, rather than try to use the free Atari Basic you should have got with your ST.

HELP!

Star choice

I am thinking of buying a Star LC-10 colour printer for my Amiga A500, and need some help. Could you tell me what software the Star will work with (e.g. *Workbench, Deluxe Paint*) or will I need special software to use it.

Also could you tell me roughly how a printer works because I know nothing about these devices.

Simon Bailey, South Croydon, Surrey

• The Star is a very good choice: it's not only reasonably fast in draft and graphics modes, but it turns out a decent near-letter-quality (NLQ) typeface too. It's also very good value for money, officially priced at around £250, but you can find it for as little as £180 if you shop around.

For general use, the LC-10 will work with any and all of your A500 software, in both text and graphics modes, since it can emulate both Epson and IBM standards. Even colour text is quite simple, since you only need to send a control code to the printer to switch colours.

However, colour graphics is not quite as straightforward. First of all, you need a suitable printer driver which allows your Amiga to control the LC-10's features. On your Workbench disk you'll find a variety of pre-set printer drivers – go into Preferences and select "Change Printer" – and you can try several of these to see if they work.

Otherwise, you'll have to write your own driver. This isn't so much difficult as painstaking, but you should find all the information you need in the LC-10 manual.

The other point is that you shouldn't expect to be able to reproduce the entire Amiga colour set. You need something like a Xerox colour printer (£1,000 plus) to get 4,096 shades. The LC-10 uses a simple multi-colour ribbon and by combining these various colours dot by dot you can build up a few dozen different shades. This should be enough to allow a screen dump of the Amiga's 32-colour mode, although you won't get an exact colour match.

Finally, a general discussion of how printers work would take up far more space than we've got room for here, but watch our Learning Curve section for beginners – you'll find an introduction to printer technology in the next few weeks.

HELP!

Standard problem

Thanks for your article on PC graphics adaptors *(Express #1)*, but I'm not sure you answered my particular question because I have an Amstrad 1640 with mono monitor.

First, if I get hold of a 150-watt power supply to power the system unit, can I use any multisynch monitor such as the NEC II or a Samsung CN4551 plugged into the video out port?

Second, will it just need the DIP switches changing to the appropriate mode to function with the monitor?

Third, the main reason for buying a multisynch monitor now is to allow for future upgrading. Would a VGA card in an expansion slot with the Amstrad EGA disabled allow VGA graphics on a multisynch monitor?

Roger Colbeck, Pinner, Middlesex

• Technically, you can do most of what you suggest. However, I'd strongly recommend that you jump ship now.

There are a number of reasons. Video out ports generally put out a composite video signal which degrades the image, and you certainly wouldn't be getting an EGA-quality display. You'd have to find some way of hooking up your Amstrad's video interface to your multisynch monitor. Later, when you switch to VGA, you have to disable the internal EGA controller, and that probably means cutting tracks on the circuit board, and I suspect that's not something you'd be comfortable with.

All things considered, you'd be better off abandoning the 1640 now. You can probably get a decent price for it on the second-hand market, and that will get you most of the way towards a genuinely expandable PC-compatible.

If you really think you'll want VGA some time soon, have a close look at the Amstrad PC2086, which has VGA as standard but doesn't lock you in to your first monitor the way the 1512s and 1640s do.

HELP!

Program for success

I am a small-time games programmer who wants to expand into the mainstream of commercial programming. Therefore, I wish to acquire a PDS system, which will aid me no end in my work.

What would it cost for a 6502 system, and where do I get one?

Nigel Smith, Handsworth, Birmingham

• *The Programmer's Development System*, for those who missed the original article (*Express* #0) is a professional assembler/monitor/debugger/graphics editor which runs on a PC-compatible and cross-assembles for Z80 or 6502-based computers.

In other words, you do all your programming work on the PC, but produce programs that run on Spectrums, or Amstrads, or Commodores, or just about any 8-bit computer.

The systems consists of an interface board that plugs into a standard PC expansion slot, the software, and an interface for the target computer. The PC system costs £500, and the target machine interfaces are £50 each.

PDS is available from PD Systems on 01-440 1130.

HELP!

Amiga timing troubles

As a 67-year-old pensioner who has found the last six years invigorated by computers and programming, I welcome the arrival of your magazine. However, may I be one of the first to ask for help.

I need to program a timing sequence on my Amiga in Basic. On the C128 this is simplicity:

```
10        TI$ = "000000"
: rest of program
100       PRINT "Time taken was ";
110       PRINT MID$(TI,3,2); "mins ";
120       PRINT RIGHT$(TI$,2); "secs"
```

Nothing so simple and straightforward is possible with the Amiga and in spite of trying many different approaches, I can find no way of producing the equivalent in Amiga Basic.

What is even more frustrating is that not even the *Advanced Amiga Basic* book offers any satisfactory solution, let lalone the CBM Basic manual. How is it done?

Edwin Le Marquand, St Lawrence, Jersey

• You're right – there is no direct equivalent in Amiga Basic. Instead, the Amiga has a system variable called TIME$ which hold the time as set from the Workbench when you first switch on the computer.

This is a 24-hour clock format so that at a little after five past six in the evening, PRINT TIME$ would produce:

18:05:10

in the format hh:mm:ss

Unfortunately, there's no way of setting TIME$ to zero from Basic, so you have to do some quite complex manipulation.

The following program shows one way of doing it. I have converted hours and minutes to seconds to avoid having to calculate the mathematical carry when the second and minute counters click to zero.

```
Main:
CALL GetTime (t)                'perform timer sub program
start = t                       'start = start time in seconds
'rest of program
'goes here
CALL GetTime (t) STATIC
h = VAL(LEFT$(TIME$,2))         'get hours
m = VAL(MID$(TIME$,4,2))        'get minutes
s = VAL(RIGHT$(TIME$,2))        'get seconds
IF h > 0 THEN h = h*60          'convert hours to minutes
m = m+h
IF m > 0 THEN m = m*60          'convert total minutes to sec-
onds
t = s+m                         't = time in seconds
END SUB

SUB ConvertSec (hours%, mins%, secs%) STATIC
hours% = elapse/3600            'get elapsed hours
elapse = elapse MOD 3600        'strip out hours from elapsed
time
mins% = elapse/60               'get minutes component
secs% = elapse MOD 60           'get seconds component
END SUB
```

VP Planner *plus*

version 2

"I can't really see why anyone would buy Lotus 1-2-3 instead of the cheaper, compatible, more powerful and versatile VP-Planner Plus"

-Amstrad Professional Computing, September 1988

Nor can we. Can you?

Comparison of VP-Planner Plus version 2, 1-2-3® rel 2.01 and Quattro®

Features	VP-Planner +	1-2-3	Quattro
Worksheet size	9999x256	8192x256	8192x256
Number of disks/ installation required	2/simple	4/complex	4/simple
2 line and/or pop-up menu control systems	YES	NO	NO
Undo/Redo commands, Entries, macros	YES	NO	NO
Transcript macro files	YES	NO	limited
Background priority recalculation	YES	NO	NO
Fast recalculation	FASTEST	see	below
Add-in toolkit for add-in programs	YES	NO	NO
Text editor	YES	NO	NO
Report generator	YES	NO	NO
Line and box drawing	YES	NO	NO
Data input commands	YES	NO	NO
Multidimensional database files	YES	NO	NO
dBASE file retrieval by field & record	YES	NO	NO
Sideways print	YES	NO	NO
Background print	YES	NO	NO
Autosave	YES	NO	YES
Range-column-width commands	YES	NO	NO
0 width command (hide)	YES	NO	NO
Up to 6 windows on a worksheet	YES	NO	NO
Print graphs from worksheet	YES	NO	limited
Number of user directly executable macros	any	27	any
Macro learn mode	YES	(add-in)	YES
Edit recorded macros	YES	add-in	YES
Macro de-bug (step) mode	YES	YES	YES
Maths/trig functions	23	18	19
Logical functions	9	7	8
Financial functions	11	11	11
Statistical functions	18	14	14
Date/time functions	15	11	12
String functions	17	17	21
Other functions	14	11	15
Total functions	107	89	100
EGA, CGA, Hercules supported	YES	YES	YES
VGA, ATI video support	YES	NO	vga only
Speed trials			
Addition large	0.82	4.00	*
Addition small	0.39	1.00	2.20
Division large	0.82	8.00	*
Division small	0.39	3.00	2.42
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Expon small	0.39	19.00	8.68
Multiplty large	0.82	19.00	*
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All times in hundredths of a second. Large and small versions of four macro driven worksheets were used: large models contain more than 75 rows and 75 columns; small models contain 75 rows and 25 columns. Tests were conducted on an AT clone at 10MHz and no co-processor. *Quattro could not load large models with 588k free after DOS. Lotus 1-2-3 returns the values accurate to the nearest second only. *VP Planner Plus* runs on IBM PCs and compatibles with 384k or more RAM

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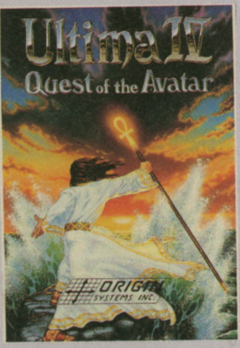
GAMES THAT TAKE OVER YOUR LIFE

Ultima series

From Microprose for: C64 £19.95cs • Atari XE/XL £19.95dk • Apple II £24.95dk • PC £24.95dk • Atari ST £24.95dk • Amiga £24.95dk (not all episodes available in all formats)

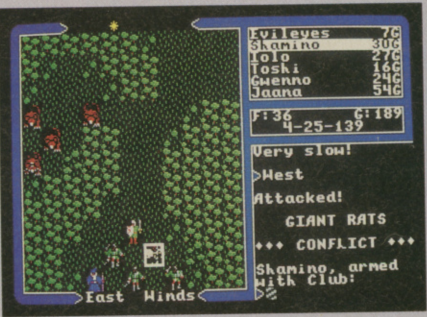


The *Ultima* series is one of the most successful computer role-playing games, and is now available on every computer that has sold in reasonable numbers in the US (unfortunately, that rules out the Spectrum and Amstrad CPCs). Distributed by Microprose in Britain, the fifth *Ultima* episode has just been released.

All of the games are set against a common background which eventually develops into the kingdom of Britannia – and since this is a fantasy role-playing game, Britannia's problems are largely of the 'malevolent wizard' variety.

The first three outings are fairly routine monster-bashing operations, though of a high standard, nonetheless. *Ultima IV*, however, broke new ground with *Quest of the Avatar*, a cosmic consciousness-raising trip in the spirit of Galahad and the search for the Holy Grail.

The graphics are less than brilliant, consisting of tiny characters wandering over a 2D map, but the size of each game, the magic and combat systems, and the wealth of background detail make them really get your imagination working.



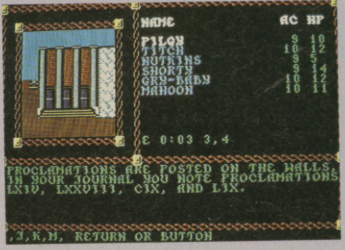
```
Evileyes   7G
Shamino   30G
Iolo      27G
Toshi     16G
Gwenno    24G
Jaana     54G

F:36      G:189
   4-25-139

Very slow!
>West
Attacked!
   GIANT RATS
+++ CONFLICT +++
Shamino, armed
with Club:
>
```

Pool of Radiance

From US Gold for C64 £9.99cs £14.99 dk • Amiga £24.99dk • PC £29.99dk • Atari ST £24.99dk

OFFICIAL
Advanced Dungeons & Dragons
COMPUTER PRODUCT
POOL OF RADIANCE
A FORGOTTEN REALMS
SSI

Definitely the one to watch, this is SSI's opening shot in a series of games based on the grand-daddy of role-playing, *Advanced Dungeons & Dragons*. SSI claims it sticks to the rules of *AD & D* putting six characters under your control, computer-controlled wandering characters and what must be the most sophisticated magic and combat system in gaming.

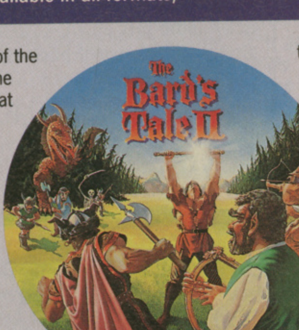


```
NAME          AC HP

PILOY          9 10
TITCH         10 12
NUTKINS        9  5
SHORTY         9 14
CRY-BABY      10 12
MAHOON        10 11

E 0:03 3,4

PROCLAMATIONS ARE POSTED ON THE WALLS,
IN YOUR JOURNAL YOU NOTE PROCLAMATIONS
LXIV, LXXVIII, CIX, AND LIX.

,J,K,M, RETURN OR BUTTON
```

The storyline of the first episode is the familiar 'city in mortal terror', but SSI is promising that everything else will be strictly above average, with 3D perspective graphics, close-up portraits of characters and monsters, and loads of other good things.

The Bard's Tale

From Electronic Arts for C64 £14.95dk • Amiga £24.95dk • Atari ST £24.95dk • PC £24.95dk (not all games available in all formats)



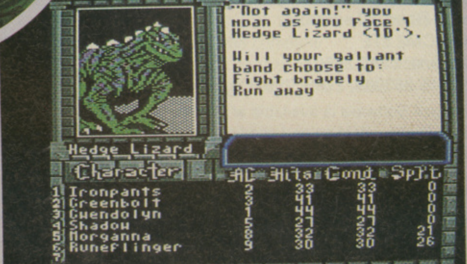
The biggest failing of the *Ultima* series was the scrolling 2D map that presented your main view of your characters' progress. Electronic Arts' *Bard's Tale* remedies that with a genuine 'out the eyeball' view of your surroundings.

The first game of the series is set in the troubled city of Skara Brae and you guide a party of six adventurers around the streets, dungeons and castles as they learn their trades of fighter, bard, thief and magic user.

There's a veritable 'cast of thousands' by way of monsters and enemy fighters, as well as a series of ever-more powerful 'lieutenants of evil' before the final confrontation with head baddie Mangar.

Well, not so final, because *Bard's Tale II* is now out on C64 and Amiga, and the third installment of the saga has just been released for the 64. The good news is that you can use your original party in the subsequent games, so you really do get concerned with their well-being.

Bard's Tale can lay a strong claim to being the definitive fantasy role-playing game to date (although the joint US Gold/SSI venture with *Advanced Dungeons & Dragons* might challenge that). It may not have the graphic excellence of Mirrorsoft's *Dungeon Master*, but it more than compensates with an enormous challenge that will have you playing for months, if not years.



```
"Not again!" you
moan as you face 1
Hedge Lizard (10').

Will your gallant
band choose to:
Fight bravely
Run away

Hedge Lizard
 Character     AC Hits Cond SpPt
1 Ironpants     2  33   33    0
2 Greenbolt     3  41   41    0
3 Gwendolyn     1  44   44    0
4 Shadow        5  27   27    0
5 Morganna      8  32   32   21
6 Runeflinger   9  30   30   26
7
```

There are arcade games, like *Arkanoid*, *Spindizzy* and *Uridium*, that have the joystick jocks in glassy-eyed ecstasy. There are the cunningly-plotted adventure games, like the *Zork* trilogy, *Guild of Thieves*, and *Hitch-Hiker's Guide*, that leave players mumbling in their sleep. Classics all.

But there are a select few games that go beyond mere entertainment, the games that threaten to submerge your own personality beneath that of your electronic alter ego. They are the games that consume months of your life as your heroic counterpart learns and grows – and, more often than you'd like, dies.

What are the factors that combine to create these special games? First, the hero or heroine must have an identity that you can believe in, a persona that you, the player, can assume. Which immediately rules out all the arcade games – you can't make much of an emotional attachment with a bunch of pixels, no matter how beautifully drawn.

Second, the character must develop as the game progresses, through the acquisition of new skills or powers, or discovering new information. This qualification, for example, rules out an otherwise excellent product like Microprose's *Gunship* which fulfills the first requirement. But *Gunship* has no story – the first and last piece of plot is "Kill the gooks", and then it's simply a question of how well you can accomplish your mission.

Third, and perhaps most important, the story must go on and on, the longer the better. There may be a definitive ending to the story – the destruction of some mighty opponent, the award of some ultimate accolade, but you'll be a long time getting there.

In any event, it's the journey, not the arrival, that makes these games so enjoyable: the striving against monstrous odds, the application of skill, the triumph of courage and daring, and the use of superior intellect.

Somewhere down the line, in the not-too-distant future, the descendants of these games will be the electronic entertainment of their day. When the science-fiction dream of direct sensory stimulation takes over from humble displayed graphics and sound effects, these games will offer the ultimate entertainment: the chance to shrug off your 'real' life and jack into a more exciting universe. And who knows, perhaps some players will prefer not to jack out again.

In the meantime, here is the *New Computer Express* list of present day Silicon Dreams....

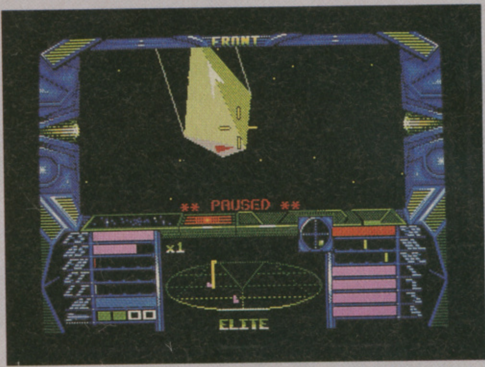
WHAT A LOAD OF RUBBISH

You disagree with the titles selected on this page? Then why not tell us what's kept you glued to the screen for months on end.

Write to: **Addiction Corner, New Computer Express, 4 Queen St, Bath BA1 1EJ.**

Elite

From Firebird for Spectrum £14.95cs • C64 £14.95cs £17.95dk • Amstrad £12.95cs £14.95dk • PC £24.95dk • ST £24.95dk • from Superior Software for BBC £12.95cs £14.95dk



Probably the first, and still one of the best, 'other realities', *Elite* fulfills all the given qualifications. Basically a space trading game, what sets *Elite* above the competition is the open-ended plot – while your goal is to receive the ultimate accolade of *Elite* pilot, how you get there is up to you.

You can be a hard-working trader, opt for life on the edge as a bounty hunter, or try the lucrative but illegal – not to say dangerous – route of trading drugs, guns and slaves.

ELITE
FIREBIRD

The gameplay is spiced up by the introduction of several missions outside the normal run of play – successfully completing these helps enormously in your quest. Coupled with the nicely-devised story is large element of 3D shoot 'em up with fast-moving wireframe graphics (solid-filled on the PC version).

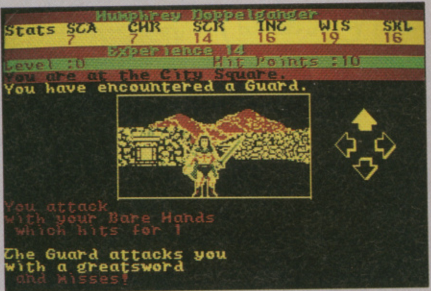
As your skill – both at trading and fighting – improves, so do the rewards with more powerful weapons, more potent defences, and extra cargo capacity. After months of play, you have a great deal invested in your character.

Alternate Reality

From Grandslam for C64 £14.95dk • Amiga £19.95dk • Atari ST £19.95dk • PC £19.95dk • Apple II £19.95dk

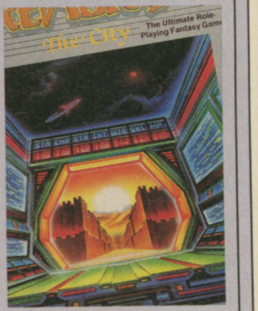
As the title suggests, this offering from Datasoft takes realism to the nth degree: in what other fantasy game might you get a job washing dishes in the local tavern, or choose between beef sandwiches and mutton broth from the menu.

Another long-playing series, the opening episode sets you down in the city of Xebec's Demise, stark naked, unarmed and with a severe cash-flow crisis. So



```
Humphrey Doppelganger
Stats SCA   CHR   SCR   INC   WIS   SKL
       7     7    14    16    19    16
        Experience 14
Level :0          Hit Points :10
You are at the City Square.
You have encountered a Guard.

You attack
with your Bare Hands
 which hits for 1

The Guard attacks you
with a greatsword
 and Misses!
```

you need a job, clothes, and weapons if you're going to survive, let alone establish your heroic credentials.



The second instalment, *The Dungeon*, is where you get down to serious monster-slaying, and further add-on modules are promised. This game, then, is truly an 'alternate reality'.

Unfortunately, the game doesn't quite live up to the promise: the graphics are fine (in the style of *Bard's Tale*) but there's no animation, and lots of disk accessing slow down the gameplay to barely tolerable levels on the 64 version.

However, the 16-bit implementations are fine, and if you want a game that could occupy the rest of your life, this is the one.

Starflight

From Electronic Arts for PC only £24.95dk

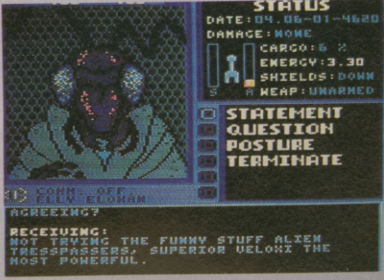
IBM
STARFLIGHT
ELECTRONIC ARTS

One for PC-owners only, and for that reason it rarely figures in discussions of the great games. But make no mistake, *Starflight* is a classic.

It begins as a more-or-less routine trading game but quickly develops into a massive odyssey of interstellar exploration and detection.

You lead a crew of six aboard your starship, mining for minerals, collecting exotic lifeforms and historical artefacts with the aim of earning money to develop your ship. This is no trivial task because there are literally hundreds of planets, all completely mapped.

But it soon becomes apparent that there is a more pressing task: to discover the story of the mysterious Ancients, and uncover the cause of a star-busting force which is gradually making all planets in the galaxy uninhabitable.



```
STATUS
DATE:04.06-01-4620
DAMAGE:NONE
CARGO:6 %
ENERGY:3.30
SHIELDS:DOWN
WEAP:UNARMED

STATEMENT
QUESTION
POSTURE
TERMINATE

COMM. OFF.
ELLY ELOHAN
AGREEING?

RECEIVING:
NOT TRYING THE FUNNY STUFF ALIEN
TRESSPASSERS, SUPERIOR VELOXI THE
MOST POWERFUL.
```

There are other intelligent races in the game, and to succeed you'll have to fight with some, but more often you need to establish peaceful relations and talk to them. They give you the necessary hints and clues to complete the game.

Starflight uses the PC's four-colour lo-res display mode, so the graphics aren't brilliant, but there are some wonderful effects and the storyline, and excellent gameplay more than make up for that.

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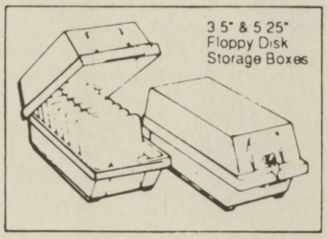
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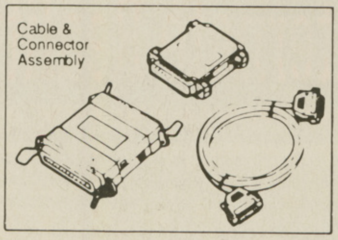
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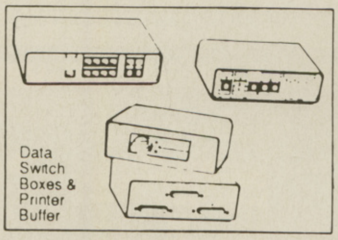
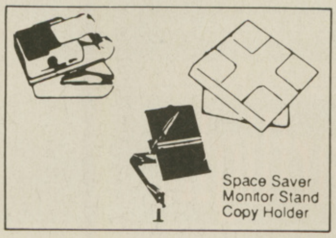

Data
Switch
Boxes &
Printer
Buffer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ST CLUB

Scream for IMG

No wonder there's a dearth of decent graphic utilities for the ST. Have you ever considered how many different types of screen format exist? Counting the various art packages will give you an idea: *Art Director*, *Art Studio*, *Degas Elite*, *Flair Paint*, *GFA Artist*, *HyperPaint*, *Neochrome*, *Profi-Painter*, *Quantum Paint*, *Spectrum 512*. Tiny. Almost every package listed has its own exclusive screen file format. Talk about reinventing the wheel!

Protext V4.02 ready

Arnor has quietly released version 4 of its popular Protext word processor. The enhancements certainly aren't anything to keep quiet about, and bring the word processor on a par with Amiga and PC versions.

The greatest improvement can be found in the configuration program. No longer do you have to tackle unwieldy configuration source. Instead you pick items from menus. Additionally, the effects of altering certain options – paper and pen colours, for instance – can be seen immediately. This is how it should have been done in the first place.

Additions include a line drawing mode (you can draw horizontal and vertical lines within your document and only print out the result using an IBM compatible printer), sequential key presses for accessing editing features (that is, you can press Control and then F to format a paragraph rather than Control and F simultaneously), First Word Plus file conversion utility, redefinable screen characters, spell-checking while typing, automatic formatting and numerous command line extras (INK for changing the colour of an ink, TOUCH for endowing a file with the current date and time, UPDATE for updating files).

Normal and Control Function keys can no longer be set. Instead they perform specific actions like cataloguing the disk, marking the beginning and end of a block, switching on help mode, jumping to the main menu and so on.

Old favourites like PANIC, QWXCL and HELP LIFE are still present. Upgrading from earlier versions will cost you £15. More from Arnor on 0733 68909.

Come on software houses, decide on one format and stick to it. Look how successful IFF (interchangeable file format) is on the Amiga (pity about the machine). Not only does IFF cover screen information, but also sound, samples, text, animation. Indeed, if there's data on an Amiga disk, you're virtually guaranteed that it follows IFF conventions.

The closest thing to an official standard file format on the ST is GEM's IMG picture format. Unfortunately it has never been taken seriously – even on the PC. It's partly Atari's fault that IMG hasn't taken off on the ST: in the early days the 16-bit machine was bundled with what is best described as a half-finished version of *Neochrome*. And as you know, *Neochrome*'s file format couldn't be further from IMG. IMG, incidentally, doesn't care what size the screen is: images can be larger, smaller, or identical to the screen boundary. The other major advantage over rival formats is that data is stored in compressed form, consequently taking up less space on disk.

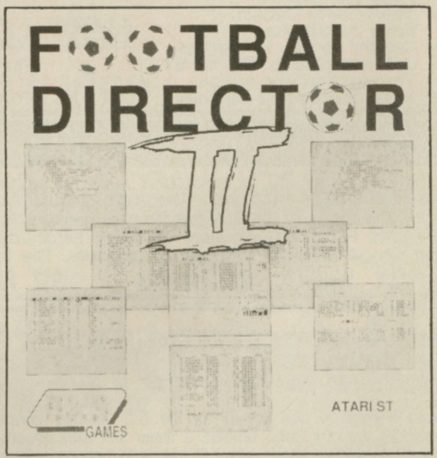
Perhaps it's not all doom and gloom, however. Two of the latest art packages, Atari's *HyperPaint* and AMS's *Flair Paint*, can handle IMG (as well as *Degas*, *Neochrome*, etc, etc). Let's hope all new art packages make a point of offering the IMG file format.

Rumour mill

- Coming soon from Electronic Arts: a *Starglider II* beater. You don't believe me, do you? I've spoken to the programmer, and judging by his past work, you're in for a treat. The game is in EA's hands as I write. It could be in yours in a couple of months. Faster and prettier than Jez San's masterpiece. You wait and see!
- Atari's much-mentioned Super ST looks like being reality late next year, and is nothing to do with the forthcoming 68030-based Unix workstation. Unfortunately the Super ST won't be as sexy as was first thought. While it will boast stereo sound, 4096 colours and hardware scrolling, it won't feature a 68020 processor. Instead the comparatively archaic and underpowered 68000 will be used. Sources at Atari claim the change in specification was made to keep the cost of the machine as low as possible. Still, if the Super ST has plenty of powerful custom circuitry that can take most of the processing away from the 68000, Atari will have another winner on their hands.
- Expecting a major turn out of games software houses at the November Atari show? Think again. Originally Database (show organiser) gave complementary stands to Ocean and US Gold so the two companies could display their wares and be part of the massive games arcade. Not surprisingly other software houses which have to pay for space – Microdeal in particular – complained bitterly at this unfair treatment. And rightly so. The result is that Database has withdrawn the offer of free stands to Ocean and US Gold. Ocean and US Gold won't be at the show.

Goal!

Low on cash in *Football Director II*? Try this hack. Load a saved game, make a note of the money you have in your bank account and then exit. Load up a word processor – anything you're sure works with pure ASCII files – and load in your saved *Football Director* file. Move to the end of the document; eight lines from the bottom you will find your bank account. Simply change this to what you want. The line below will have a similar number. Change this so it's equivalent to the new bank account entry. Save the file when you have finished.



Load *Football Director* and load in the altered saved game. You will find you have a very healthy bank balance. With this money you can buy players, make ground improvements and so on.

Richard Monteiro

PC UPDATE

Sprint statement

Can you see anything different about this week's column? Yes, you guessed, it's written in Borland's new super word processor, *Sprint*. At first look it's very impressive. It installs from the 12 x 360K disks supplied (you can choose 3.5" disks if you prefer), copying just the drivers you need onto your hard or floppy disks.

The manuals are something of a tour de force. The Reference Guide, User Guide and Advanced User Guide, each at over 350 pages, are supplemented by a Guide to the User Interfaces (one of the big features of *Sprint*), and they are all housed in a large library sleeve. You certainly get your money's worth there.

SPRINT
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Running the program calls up a nice clean edit screen with a single ruler line at the top and a status line at the bottom. *Sprint* is menu or command-driven, but it's far easier to learn the program from the menus. [F10] calls up the main menu, running vertically down the right of the screen, and options lead to subsidiary menus spreading across the screen.

Most things are taken care of in *Sprint* – there's a 100,000 word dictionary and a 240,000 word thesaurus (though no word counter) and the word processor can handle up to 10 files at once. It's intelligent enough to remember which documents you have open at the end of a session and reopen them at the start of the next one.

The most publicised feature of *Sprint* is its compatibility with other word processors. As well as being able to import from many of the most popular programs, retaining some or all elements of formatting and typestyles, it can also export to them. Not only that, but the controls *Sprint* responds to can be completely customised so that the word processor will work very like any one of these other pieces of software. Whether this will prove to be the attraction Borland think it will, depends on how close to the originals these alternative User Interfaces prove to be. *Sprint*'s own interface seems very reasonable, and includes some useful extras, like the ability to back up the current document as a background task while you're still working on it.

More time is needed to reach a full appraisal of the software, but it feels nice, if sluggish in places on an XT.

Your local directory

Apologies to anybody who already knows this, but I only really started to use it myself recently. The MS-DOS directory command can take full paths and wildcards. This effectively means you can call up a directory of any set of files from any directory or sub-directory on your system. Rather than typing:

```
CD FRED
DIR
CD \
```

to display the contents of the sub-directory FRED from the root and return there, you can type:

```
DIR \FRED
```

When you type DIR on its own, MS-DOS assumes you want to show all files (other than hidden ones). In effect, it defaults to *.* for a straight directory listing. There's nothing to stop you adding other wildcards to your DIR command, though. For instance, DIR *.EXE will display all the executable files in the current directory, and DIR AUTO*.* would show you all files beginning with AUTO.

You can combine paths and wildcards with a command like DIR C:\BATCHES\*.BAT to view all the batch files in the BATCHES sub-directory of your C drive, no matter where you are in your system.

Out of control

One of the advantages of the Apple Mac (Pah!, wash your mouth out) is that control sequences for programs are defined by Apple, rather than being left to individual software developers to sort out for themselves. This means nearly all programs written for the Mac use the same basic key sequences for deleting a word, killing a file or any of the other mundane housekeeping chores that software is supposed to cater for.

On the PC, though, any programmer is entitled to have a fling. If you want to use [Ctrl]D to exit from your program or [Alt]K to refresh the screen, there's nothing to stop you. Those examples are no exaggeration, either, as they come from a word processor which recently fell into my hands. The same program uses [F10] [Enter] [Ctrl]D to print a file!

The problem of choosing mnemonics for commands gets more involved as programs become more sophisticated and offer an ever increasing number of functions on a limited number of special keys.

Illogical key sequences are most prevalent in products which originated in the Public Domain, or as Shareware. These products have often evolved from simpler programs, which first started life with quite logical sequences for their commands. As new versions are released, though, other less memorable sequences have been tacked on to cover the new functions.

So what's the solution? One way which seems to work well and has been used to good effect in recent programs, including *Sprint*, is to offer a menu system in parallel with key sequences, and to display the key sequences in the menus. Then, not only do you have the facility of flicking through the menus when you're new to the program, but each time you call one up you are reminded of the shortcut you could have used instead.

Menu options, of course, should be selectable with a highlight bar or by pressing a single character, highlighted within the option.

Simon Williams

Feedback

If you find an item in this column of particular interest, have any hints or tips on DOS or related PC matters, or strongly disagree with any of my ramblings, please drop me a line. Write to PC UPDATE, New Computer Express, 4 Queen Street, Bath BA1 1EJ. Sorry, but I can't undertake to answer letters personally.

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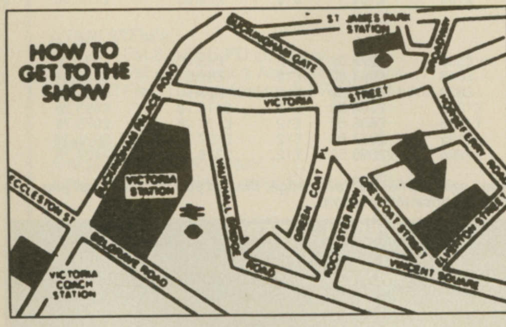

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AMIGA BLITZ

Incompetent Commodore...again!

Quote of the week comes from the Marketing department at Commodore – to be more precise, the lips of a certain Lesley Rehab. When we recently phoned her in connection with acquiring an A2000 bridgeboard for review purposes, Lesley, while tapping away at a mysterious keyboard, was quizzed as to the whether Commodore have enough confidence in the Amiga to use the machine themselves. Calling upon her extensive knowledge of all Commodore computers, Lesley replied 'Oh No! But it's a Commodore something or other!'

Dragons Lair on the Amiga

Do you remember the old video disc arcade machine *Dragon's Lair*? If, like me, your 20 pence lasted roughly ten seconds, then you'll no doubt be delighted to hear that you'll soon be able to practise at home – on your Amiga!

The American company that brought you the C64 Emulator, ReadySoft, has taken on the monumental task, and advertisements have already started appearing in the American computer press. The game requires at least 1 Megabyte of ram and even with a second drive, frantic disk swapping will be the order of the day as it's packed onto an astonishing six disks!

ReadySoft claim the game features real-time cartoon animation that push the Amiga's graphics hardware to its limits. From the various screen shots I have managed to find, *Dragon's Lair* looks like being one hell of an arcade conversion.

Plans to release the game in Europe are still unclear but no doubt some interprising company will see fit to import the game. Even if *Dragon's Lair* does reach our shores, the price is undoubtedly going to be high. In the states, the game is advertised for just under $60 and if past experience is anything to go by, the price in this country will be a direct one to one conversion.

Arkanoid Action

Here's a great little cheat for those of you struggling with Discovery Software's excellent arcade conversion. When the Vaus first appears, press the space bar and enter "dsimagic". Once you've done this, press the space bar again and a yellow capsule labelled "DS" will float down the screen. Catch the capsule then press the 'A' key and you will now be in cheat mode.

By pressing various keys on the keyboard that correspond to those on the various capsules within the game, you can make any one of the capsules appear. The letters are:

B = Break – Makes the ball split into three separate balls.
C = Catch – Stops the ball from rebounding off your bat.
L = Laser – Allows you to destroy bricks with a laser.
S = Slow – Slows the ball down to a more acceptable level.
F = Final – Takes you to the final confrontation with DOH.

Unfortunately, there seems to be no way of turning the cheat off once it is activated so be sure to keep your hand well away from the keyboard!

Amiga Protext

Something wonderful has happened – Amiga *Protext* has finally arrived! Forget your *Word Perfects* and your *Scribbles*, the king of all word processors has eventually made it across onto the Amiga. Bliss, oh true bliss!

Until now, I must confess, this column was actually written on an Atari ST running *Protext*, but now the Amiga version has finally arrived I solemnly vow never to use an Atari ST for word processing purposes ever again.

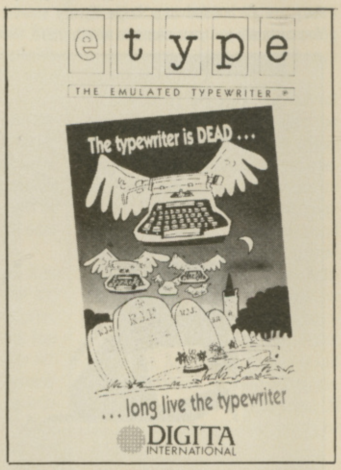
After using our review copy for about a week now I can safely say I'm hooked. There is just nothing to touch it for both power and ease of use and in my opinion, it is now the premier straight word processor for the Amiga.

If you're in the market for a decent word processor then do yourself a favour, buy *Protext*. It is quite simply a program that's too good to miss. A full review of Amiga *Protext* can be found elsewhere in this week's *New Computer Express*.

Well, that's enough advertising for Arnor. If anyone at Arnor is reading this, I'd just like to say that a complimentary copy wouldn't go amiss! Please!?

Digita Dodos

Digita, a company that is renowned for releasing some real state of the art products, has released some really exciting packages for the Amiga. The two packages in question are *Day by Day* and *Etype*.


etype
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... long live the typewriter
DIGITA INTERNATIONAL

• Etype – putting back the frontiers of technology...

Day by Day is described as a "comprehensive life organiser", which, roughly translated and de-hyped, means 'diary'. The most amusing item of hype on the packaging is the "intelligent calendar that will look after you,....right up to the year 2000". Well Digita, the year 2000 is not that far off now, you know!

Etype gets the award for worst idea and biggest step backwards in computing since the Amiga CBM 64 Emulator. The package is quite simply a typewriter program. Yep, Digita are really in the forefront of software design with this one. It works by transforming your Amiga and printer into a typewriter; what you type is instantly sent to your printer.

Surely, Digita, the whole reason why the computer has revolutionised tasks such as letter writing is because of the flexibility in error correction, spell checking etc that programs such as word processors offer?

A Furtle Attempt

The English Language has come along way and just to prove it, try reading a Commodore press release.

We were recently sent a communication concerning the fabled Amiga BBC Emulator and hidden within the specifications was a rather interesting feature supposedly offered by the Emulator: A Disk *Furtling* System.

Ruling out the possibility of it being a typo, one can only muse at what torturous mind came up with such an addition to the already overflowing list of computer jargon.

Jason Holborn

SPEX

The pitching and rolling road

Activision/Mediagenic, or whatever they're calling themselves this week, surely deserve an award for being the most ambitious software house around.

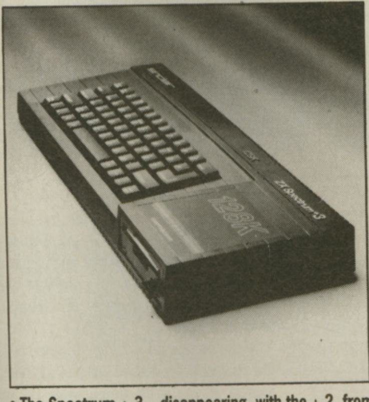
> ### Ad-stounding!
>
> ***I'm writing this week's column in a state of shock. When switching the telly on to catch up with events in Brookside Close. I found myself watching an advert for the +3. Do my eyes deceive me or is Baron Sugar finally starting to push a computer with the Sinclair tag on it?***
>
> ***For those who don't watch quality programmes, the advert basically features a trendy-looking teenager playing ancient and totally unimpressive games on his +3. It included several close-ups of the disc drive and phrases like 'advanced Sinclair Technology' and the classic 'at £199 even I can afford to save the Earth'. Still, computer ads never have been known for their quality. Remember Commodore's Elephant advert? Me neither.***

First, they achieve the impossible and manage to crunch to the numerous megabytes of arcade stunner *Afterburner* into 48K, and successfully too if the definitive *New Computer Express* review is anything to go by. Not one to rest on their laurels, they are now considering conversions of *Galaxy Force*, basically *Afterburner* in space with knobs on – and the hydraulics tend to throw you around more too.

You'll have to wait until late '89 to see how it turns out, but in the meantime you could always have a go at constructing your very own hydraulically-controlled cockpit using 2 washing up liquid bottles and lavish amounts of sticky-back plastic...

Smiths pull out

Ever since the ZX81 was released and people the world over got to grips with RAM pack wobble, there's been a Sinclair machine at W.H. Smiths. That's probably why I was more than a little surprised to hear Smiths have decided to drop the +2 and +3 from their shelves, apparently because of poor sales. At Amstrad's prices I'm not surprised. The computer that will be replacing our beloved Speccy is the ST. Arrgh!



• The Spectrum + 3 – disappearing, with the + 2, from Smiths...

Footie frolics

Here are a few more signings for the extensive range of football games on the Spectrum. Originally planned for release by Piranha before they floundered, (couldn't resist that harmless fish pun) *Roy of the Rovers* is the game of the comic strip.

It's up to Roy to save the day once again as this time the Melchester charity 5 a side team has been kidnapped. To find them Roy has to solve a terrible arcade adventure using "all his charm and charism to survive." I think you get the idea.

Having hopefully recovered Roy's compatriots you can then take part in the football playing part. It's five-a-side, (very convenient for the programmers!) unplayable and the blocky black and white graphics can hardly be said to emulate the famous red and yellow strip of the comic-based Melchester Rovers.

Much better and almost worth printing that picture for in issue 1 is *4 Soccer Simulators* from Code Masters. This was pretty well covered (!) in the last issue, but my edited highlights would go something like this: Good variety, shame about the graphics. Better than the recent Lineker and Beardsley games but not a patch on *Matchday*. Four quid too expensive, it won't leave you as sick as a parrot but hardly over the moon either.

And now for something completely different...

The *Computer Maniacs Diary 1989* from Domark is a product which really needs to be advertised under the slogan 'for the computer user who has everything'

It's a decidedly off-beat computerised diary, with most of the features found in its paper counterpart, like horoscopes, calendars and birthdays. There are also trivia quizzes, hangman, weather forecasts and biorhythms. Probably the most useful feature is the Multi Egg Boilerama System. (M.E.B.S.) simply input the egg size and viscosity of yolk and you're given a boiling time! Hmmm, just what I've always wanted.

Shuriken points

Last Ninja II is enjoyable once you've managed to get to grips with the awful control method.

Here are some hastily-prepared tips for level one:

- the best unarmed fighting method is to keep kicking and then occasionally punch.
- don't be too brave. It's often better to run around the enemy rather than lose some of that all-important like force.
- collect a map and the objects you need will flash when you enter a location.
- punch a panel on the wall to open a trapdoor on the first screen.
- the key opens the grate in the park.
- weapons just waiting to be picked up include the staff, lying with sticks on top of a wall, a nunchaka, split in two(each parts in one of the toilets), and throwing stars (not as lethal as the free plastic one) are located in a box in the park. Watch out for police brutality.

Speak up!

New Computer Express's plush executive reception hasn't actually been flooded with your mail yet.

Take this as an impassioned plea for more. I'd really like to see your suggestions (if they're indecent, all the better), opinions and points of view. Hints, tips and pokes are especially welcome. The fact is, I don't get much time to play anything thoroughly enough for really in-depth material. Fanzines and independent software will get just as much coverage as their glitzy counterparts providing they are good enough. So come on your Specettes, get writing – you'll make an old columnist very happy!

Send everything to me at **SPEX, New Computer Express, 4 Queen Street, Bath BA1 1EJ.**

Robin Alway

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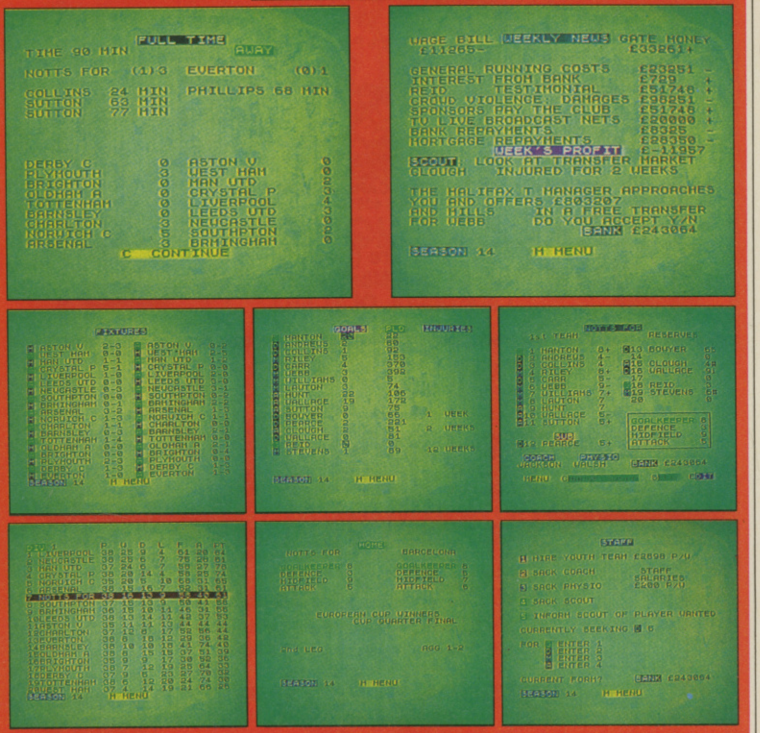

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                FULL TIME
TIME 90 MIN               AWAY

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COLLINS  24 MIN   PHILLIPS 68 MIN
SUTTON   63 MIN
SUTTON   77 MIN

DERBY C          0  ASTON V        0
PLYMOUTH         3  WEST HAM       0
BRIGHTON         0  MAN UTD        2
OLDHAM A         0  CRYSTAL P      3
TOTTENHAM        0  LIVERPOOL      4
BARNSLEY         0  LEEDS UTD      3
CHARLTON         3  NEWCASTLE      0
NORWICH C        5  SOUTHPTON      2
ARSENAL          3  BRMINGHAM      0
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SECTOR 64 SECTOR

Savage tips...

Insert your original of that cool Firebird game into the cassette deck and follow the guide.

Level 1

Reset your computer (if you can, but don't blame us if you blow it up)

Poke 32361,44 – gives you loads of energy
Poke 24302,44 – gives you loads of lives
SYS 20480 – to restart the game on level 1

Level 2

Sorry, we've only got a password for level 2 – SABATTA

Level 3

The password is PORSCH. After that,

Poke 26482,44
Poke 26485,76
Poke 26486,128
Poke 26487,103

– that's for infinite energy when you get there. Then type

SYS 22528 to restart the game on level 3.

...and for Pacmania too

For infinite Pac-men just enter the poke below:

Poke 28520,165
SYS 14336 to start the game.

New releases

Master Blaster • Zeppelin • £1.99

Master Blaster is similar to the arcade game *Blasteroids*, and at £1.99 you can have as many goes as you want.

Now here's something to smile at. US Gold are releasing *Thunderblade* at the beginning of December. *Thunderblade* is a 3D blast played from various viewpoints including from on top and in front. The programmer behind the game is Chris Butler, creator of masterpieces such as *Ghosts and Goblins*, *Commando* and even *Space Harrier*.

Listings

This week's offering is one of those routines which is very interesting on the 64. I say this because the machine was not built to do such a task. The routine below is doing a trick with the Vic chip enabling it to give the display area a Y position. This effect has been used a lot in PD demos.

```
0    B=49152:FORL=0TO222:READA:POKEB+L,A:
NEXT:POKE16383,00:SYS49152
4    REM ****************************
5    REM ** DATA FOR MACHINE CODE **
6    REM ****************************
10   DATA120,169,192,141,21,3,169,13,141
20   DATA20,3,88,96,169,1,141,25,208
30   DATA169,127,141,13,220,169,129,141,26
40   DATA208,169,40,141,18,208,174,0,193
50   DATA173,18,208,168,41,7,9,24,204
60   DATA18,208,240,251,141,17,208,202,208
70   DATA237,160,0,185,79,192,141,0,193
80   DATA238,56,192,200,192,144,208,5,169
89   DATA0,141,56,192,76,49,234
90   REM ****************************
91   REM ** SCREEN POSITION TABLE **
92   REM ****************************
100  DATA2,2,2,3,3,3,4,4,4,5,5
110  DATA6,6,7,7,8,9,10,11,12
120  DATA13,15,17,19,21,23,25,27,29
130  DATA31,33,36,42,45,48,51,55
140  DATA59,63,67,71,75,79,83,87,91
150  DATA95,98,101,104,107,110,112,114,116
160  DATA118,120,122,123,124,125,126,127,128
170  DATA129,129,129,130,130,130,131,131,131
180  DATA130,130,130,129,129,129,128,127,126
190  DATA125,124,123,122,120,118,116,114,112
200  DATA110,107,104,101,98,95,91,87,83
210  DATA79,75,71,67,63,59,55,51,48
220  DATA45,42,39,36,33,31,29,27,25,23,21
230  DATA19,17,15,13,12,11,10,9,8,7,6
240  DATA6,5,5,4,4,4,3,3,3,2,2,2
250  REM ** START YOUR PROGRAM HERE **
```

To make this routine as flexible as possible I have included some pokes to enable things to be turned on and off.

Try typing

POKE 49212,141 (This will keep the screen from moving off the data between 100-240)

POKE 49212,173 (This will stop the program from reading the data and allow you to move the screen yourself using the "Y" position **POKE 49408,(2-255)**

POKE 49195,24 (Will give you the normal display screen)

POKE 49195,56 (Will give you the bitmap for hi-res picture displays)

Show report

Sensible Software have been busy in recent months writing their most impressive soccer game, *Micro Soccer* (Microprose). We weren't the only ones who, at first screening, had thought the game was running on an Amiga. The 64's not dead yet!

Just some of the features are listed below:

- Fast rewind and playback to capture those glorious goals
- All kinds of weather – rain, thunder and lightning etc – which includes rain splashes hitting the pitch, plus all those lovely overlay sprites to give excellent resolution.

Sensible Software's team of developers are Chris Yates, Jon Hare and Martin Galway – the person responsible for much of the music in *Game Over*, *Wizball* and *Terra Cresta*. You'll be surprised to know that not only is Martin Galway a master of sounds, but the whole of Sensible Software is too. Chris Yates and Jon Hare, plus a few others, have put together a rather impressive music tape which contains three soundtracks. The tape was being sold at their stand at the exhibition. The name of their band is *Touchstone*, so watch out for them, because they could be playing at a gig near you! They even informed us that their next game will be named after *Touchstone*.

Also exhibiting at the show was Southampton-based Megaland, which was selling the newly-launched 1581 disk drive.

Many of you may remember in the second issue we talked aboutl the '1581' disk drive which was rumoured to have 800K on a 3.5" disk, in common with the Amiga. Well, we are pleased to announce that the disk drive has now been launched in the UK. It is believed to be totally compatible, as the operating system is within the drive. The price ranges from £115. For further information write to Megaland's new address – 42-44 Millbrook Road East, Southampton. Or phone them on 0703 330544.

Public Domain

Here's a program worth getting hold of – a public domain game called *Hallax*, by Andrew Lumley (Alias YAT). This is our pick of the week from PD software, as it's a complete game reminiscent of *Breakout*. It's great to find out that there are many commercial-quality public domain games for the 64. *Hallax* consists of 32 levels and five weapons to be collected. And to keep up the excitement even longer, *Hallax* has a built-in screen designer where you can design up to 10 levels. It features many different varieties of blocks to knock down.

This masterpiece can be found on Compunet by going to Relax Designs directory at "RELAX". But if you're not a member of Compunet, I'm sure that this fantastic game will soon be in a 64 public domain library.

Well, we end on a different note, with the release of *Double Dragon* by Melbourne House. The game was selling like hot cakes at the Commodore Show – could it be the Christmas best-seller?

That's all for this week – remember, you only have 7 days to wait and not a month before the next *Sector 64*...

Ian & Mic

CPC centre

Oh dear...

To all those having trouble with their disk drives who can't find a screw on their read heads, I have a small confession to make. When last week I said 'read head', what I actually meant was 'drive shaft'. I'm very sorry about this, it won't happen again (*it certainly won't: you're fired – ed*).

Sixteen bitch

You'll never guess what I did at the weekend (I beg your pardon?) – no, actually, I went to see a friend's computer. These here 16-bit jobbies do look and sound great, but I had one small question for my mate: *why does it take thre e quarters of an hour to load the first bit of pro - gram?* (You'll notice I asked him in italic, just to confuse him.) His reaction was something else. I dunno, these technophiles rant and rave, attacking every other machine in sight. You won't get that from CPC Corner, no sirree!

Sit them down in front of *Protext* on ROM, and they soon go quiet. I can load this word-processor, open a document, change it, save it, quit – all while Mr. Loudmouth is goggling at his loading screen. Now I like playing his games, but I just wish he'd also use his machine for something useful, rather than screaming, 'CPC? Load of rubbish!' at me all day. Still, I think he's mellowing. Or going hoarse.

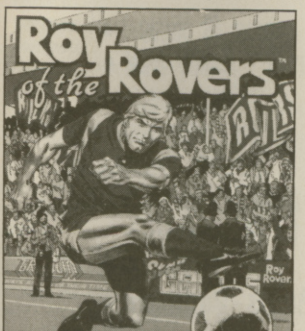
Infirm future?

It's worrying that Amstrad are letting Soft 968: the CPC Firmware Guide go out of print. It is, of course, used by programmers and 'serious' users to understand their CPC's innermost workings. The future looks bad, with people unable to discover vital information. This is vital to future sales.

Dead fish, jogging man

Way back in time there was to be a computer game based on the exploits of Roy Race and Melchester Rovers. Then Piranha went bust before the game was finished. Gremlin took over, and now the game is finally arriving on the CPC.

You play Roy (surprise surprise), who has to rescue his kidnapped team mates before the kick-off of the most crucial match in the club's history (happens to Brian Robson all the time, that). If they lose, the club will be sold and the ground'll be turned into a car park. Fortunately, Roy's mum is ready to revive and rescue players with a nice hot cup of tea (or something not quite totally unlike tea).


Roy of the Rovers
Roy Rover
FOR USE ON AMSTRAD/SCHNEIDER CPC Computers

• **Melchester revisited**

And while we're on the subject of something hot and refreshing (a feeble link, but it'll have to do) we have something hot off the fax machine, in the shape of a new movie licence for Grandslam. Arnold 'stoneface' Schwarzenegger's latest film, *The Running Man*, is the movie, and the plot follows that of the film: i.e. loadsa violence (and lots of bad acting?). Its launch coincides with the release of the video in March next year. And it brings us, very nicely, I thought, onto this...

Dear CPC Corner,

First of all, thanks for being there – it's good to see the old Arnold still getting some attention. Second thing, I think I must be getting old or something, either that or I'm correct in thinking that new games increasingly seem to be divided into cheap-and-nasty coin-op conversions and mindless vigilante-type violence shoot-em-ups. Don't the views of us players count for anything any more?

Andrew Lambirth, London

Well, yes they do: but of course as long as coin-ops and tacky gore-spillers are what sell, then that's what we're going to get. Anyway, I think you're exaggerating somewhat, in that there are always different sorts of games coming out – *Roy of the Rovers*, to take one example from this week's column. It's the weakest games (the coin-ops and the plotless wonders) that need the greatest advertising push to sell, and they're the ones that accordingly spring to mind when you think of what's out.

Sam N. Joker and others

Having trouble solving the anagrams in Vindicator? OK so you haven't, but just supposing you had been, this list would be invaluable. When prompted by a particular anagram just type in the corresponding solution.

Anagram	Solution
Sean Jim Haggis	James Higgins
Nathan Junnod	Jonathan Dunn
Dr Antoni Clam MD	Martin Mcdonald
Ron H Vain	Ivan Horn
Huge Phalus	Paul Hughes
Vannate Klein	Kane Valentine
Sam N Joker	Mark Jones
Malek Mib	Mike Lamb
Leon Wupas	Paul Owens
Joe Hangmen	John Meegan
Ben Stimulor	Simon Butler
Dr Kane Wad	Dawn Drake

Bubble Bobble ***is split into two parts, and here's the password required to get you into the second program. It's a biggie, so make sure you type it in correctly.***

ZZZ133VZZZZZZ4ZZZ1Z4V44ZZ1Y24V32

I think that's right...

One last point: the most mind-numbing games of all aren't actually the sort of things you talk about: they're the 'fitness training' elements where you waggle your joystick vaguely about and may or may not achieve three lousy push-ups if you're lucky. Now they're what I call dull!

Sugar's disregard for sexiness

I've been analysing the fascinating *NCE* profile of Alan Sugar. So far he looks a heartless shark who'll snuff it due to high blood pressure by the time he's 60. The encouraging thing, if you can call it encouraging, is that Our Al has always shown himself to be driven solely by the bottom line. Now the CPC is so well established, and its innards so cheap 'n' easy, that as long as there are people to buy them he'll still flog 'em. Simple as that. They're not sexy – so what? You want them, we got them. Fair restores your cynicism in human nature, doesn't it?

Steve Carey

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PCW PATCH

Flipping marvellous

Schizophrenia gets a bad press generally, but the recently-released *Flipper* gives you the acceptable face of split personalities. By separating your PCW's memory into two halves, you can run CP/M in one half and *LocoScript 2* (or another CP/M prog) in another, flipping across in a couple of seconds. Right now it works with virtually all programs except for *Mini Office* (an upgraded version, promised for some time in February, will do).

Though cheekily priced at £24.95, *Flipper* is an invaluable tool and really is like having an extra PCW. The best thing will be the ability to flip out of *Tetris* into a *Mini Office* spreadsheet showing your budget projections when the production manager shows. Details from Software Imperative on 0453 886931.

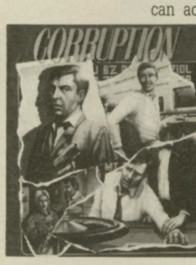
Amaze your friends

How to get rid of CP/M bores who show you their PCW at parties: type at the A> prompt [EXIT] followed by X then [RETURN]. The display becomes one line deep, more cramping to work in than a PC, an Apple Macintosh's pokey screen, even a Z88. You can restore it by typing [EXIT]-zero-[RETURN], but you don't have to tell them that.

Corruption on disk

A world of legends, incredible stories, beautiful young people with fabulous riches, far removed from reality – yes, it's life in the City.

Now Rainbird have brought out an adventure for the PCW based on routine happenings in the financial world, such as intrigue, plottings of murder, insider dealing etc. A graphics-plus-text adventure, *Corruption* works really well on the PCW; the sort of adventure even businesspersons will get hooked on. Will you get them before they get you? Will your integrity remain intact? I hope not. *Corruption* is £24.95 from Rainbird on 01-240 8838.



The gift of speech

In Japan you can get alarm clocks which wake you up with a syrupy Japanese woman's voice saying "It is now time to get up and go to work. Please oblige me by honourably waking up. It is now time to get up", etc. etc. Oddly enough it has never been a great export hit.

Could it happen here? Well now it can, even on your Amstrad. SM Engineering are working on a speech synthesiser module which will work on your PCW. Now your BASIC programs can actually speak to the user, report error messages gleefully and give a synthesised laugh when the message "Disc error on track 6, sector 5 – Retry, Ignore or Cancel?" appears.

Sensible uses abound – particularly for the disabled – but even for those of use who speak too much already there are no doubt plenty of serious applications. Details from SM on 0323 766262.

Rob Ainsley

QL corner

Cometh the hour...

Tony Price of Qualsoft has finally succumbed to pressure from users and will – with any luck – be demonstrating a VT100 emulation addition to his communications software at the ZX Microfair next Saturday (December 10th).

This new feature will improve things for those who use services such as BT Gold and can also take advantage of the improved screen handling and box graphics.

Now whilst it's quite clearly a logical extension to the package, in all honesty it's been a long time coming. These things take time, obviously enough. Tony has been badgered silly on every appearance at a show or event to include this, and will probably thus be glad to see the back of it. Let's hope it's worth the wait.

Late year line-up

Just five days before Christmas, PDQL will be releasing a new batch of products for the QL (and the Thor, whilst we're at it).

Weighing in at £59 is *Basic C-Port*, which enables you to convert your *SuperBASIC* program to C. Thereafter, it can be compiled on the QL or bunged over to a PC (or wherever).

At the bottom end comes *TexTidy*, a useful package for a tenner which converts *Quill* files to ASCII text files ready for DiscOVERing or use in the Editor.

Last in the late year line-up is *Hardback & Finder* at £25. PDQL reckons that the first provides "a sensible indexing enquiry routine" which takes you through the directory/subdirectory structure. *Finder* seeks out those part-forgotten files buried in sub-sub-directory depths.

PDQL can be reached on 021 200 2313.

Paul Connell

Chipping in price rises

D-Ram chip shortages have hit the whole industry throughout the year, with the likes of Amstrad and Atari bewailing their fates.

But now, just as some of the bigger players are beginning to see some light at the end of the tunnel, so comes news of the effect on the QL market. And it's a question of needing to move very fast if you don't want to get caught out.

Essentially, the suppliers of QL expansion boards have been placed in a quandary with the continuing chip shortages. There are now rumours of some vicious price hikes in the offing. Few are as yet in a position to say how much prices will be increasing, but there is not that much doubt that rises will indeed have to occur.

Why this will be happening is easy to explain. The boards they are selling consist almost solely of chips. Considering that the suppliers are up against all-comers – many of them seriously large concerns – I suppose they have a point.

One effect is that it will make the second-hand market look very interesting indeed. Those looking for a bargain will have to move very fast. You have been warned!

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BEEB BOX

Shock, horror!

Open warfare in the classroom! Computer makers scramble for kiddy business! Computer cutthroats move in on Sir! So might the tabloids describe the current situation in educational computing.

Acorn of course are market leaders in education in this country with the Master 128 and Archimedes series of computers, but at the moment they have both Apple and RML nipping hard at their heels.

Beeb book

This week's little bit of inside information about your BBC comes courtesy of the Master Operating System Guide from DABS Press.

This book is a superb reference work for anyone wishing to develop programs for the Master series computers. It contains full details of new features, example programs, a mass of detailed information and intriguing minutia.

For example, you can put comments into your batch files at BOOT up, simply by typing *I <text> followed by a carriage return. This makes them much more understandable, as it is so easy to write a batch file, and then forget what on earth it is all for later on!

Such is the bitterness in the conflict, that Acorn MD Harvey Coleman in a recent speech, condemned the advertising of RML, and admitted that Acorn were considering referring the matter to the Advertising Standards Authority.

Acorn, of course, are never shy to make claims themselves, and Coleman went on to say that demand for Master computers exceeds supply at present. This sounds impressive until you realise that there is some doubt as to whether Acorn are actually making any Master computers at all!

However, sales are strong at the moment, probably because schools are now buying computers by the roomful, rather than in ones and twos. In this area Acorn have the trump card of a massive installed user base, and also an entry price point considerably lower than the opposition. This together with the Econet network means they practically have the primary and secondary sectors sewn up.

However, education is really a lot of niche markets all lumped together, and it is these that Acorn's competitors are attacking with the aid of aggressive pricing, and advertising. Both small companies like RML and large ones such as Apple are hoping to establish footholds in the further and higher education, with a view to gradually moving downmarket.

Software subsidies

Rumbles of discontent can also be heard in the educational software market, where 4Mation's Mike Matson was complaining about the DTI's policy on subsidies.

Apparently 5 year old software converted for the RM Nimbus will get a grant, whereas brand new software for the BBC will not. He and Bill Band from Sherston have arranged a meeting with Labour spokesman Bryan Gould, with a view to raising the matter in the House of Commons.

Andrew Brown

MSXTRA

Software shortage?

I'll start with a good moan. Why is it that we in the UK are not being supplied with software readily available in Europe and Japan?

For example, *R-Type* is available in Japan, and is supplied on ROM for the MSX 1 and 2. This game is available on every major format in the UK but MSX. I would have thought that as an MSX version had already been coded it would have been easy for Electric Dreams to supply it alongside the others.

Also, take a game like *Fernando Martin, Basket Master*. This is a game from the Spanish software house Dinamic, and is said to have sold 28,000 MSX copies in Spain. If this game is that popular, surely someone could send a few copies over to the UK for us poor software-starved MSXers?

Maybe one reason we don't see better support here is that although there are quite a few thousand MSX users in the UK, when a game is released very few users actually buy it. Piracy amongst MSX users is rife, and unless more people are willing to part with their hard-earned cash – well, there soon won't be any software left *to* copy.

Konami club blues

Any members of the Konami Software Club out there who are wondering why you haven't received your monthly newsletter – it's because it's no longer a monthly.

I've been reliably informed that it will now be published every three months. Your next copy should be available in December.

Show success

The first Alternative Micro Show has just been held in Birmingham, and MSX Central, a Midlands-based user group, were there to fly the MSX banner.

My spy at the show (thanks David) informed me that although the show started at a leisurely pace, it picked up nicely in the afternoon. In fact the MSX stand drew quite a crowd, with particular interest being shown in the Philips VG8280UK MSX computer.

Spain's no. 1

Want to know what's no. 1 in the Spanish MSX charts this month? Well I'm going to tell you anyway – Temptations, from a company called Topo Soft. Now Topo Soft are, I believe, going to start distributing software in the UK, so maybe this game may shortly reach our shores. If I could read Spanish I could tell you what this game is about...

This machine is the computer with a built-in digitiser, Gen lock, mouse control etc, and retails in this country for around £900. Even at this price several orders were taken. I was told that there wasn't a computer at the show to touch MSX, but then we are biased.

Plenty of new software was displayed and sold on the MSX stand and several new titles from Japan were in evidence, so all in all MSX Central had a very good show.

Final reminder

Don't forget the MSX Tech Show at the Heelands Meeting Place, Milton Keynes on December 4th. Phone 0908 674065 for details.

Keith Neal

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BULLETIN BOARD

We are now running a Viewdata bulletin board on 0772 454328 *6pm to 9am weekdays and all weekends* which is mainly QL specific but includes a Z88 section and is soon to include an Amiga section.

We are at the moment writing *Amiga to Z88 file transfer software* and *Amiga to QL software.* If you are interested in either of these then please contact us for more details.

We stock too many products to mention in any advert, *(we have a regular four page advert in QL World each month)*, so please send us a SAE or give us a ring for our free product guide and price list.

The next ZX Microfair is to held on December 10th at the usual Hoticultural Halls, London, see us there as usual on stalls 91, 92 and 93.

A goods ordering section is now available on the Bulletin Board, so goods can be ordered by Modem.

NORTHERN SINCLAIR SHOW

Due to a lack of previous shows in the North for Sinclair machines Sector Software are to be organising a Northern Sinclair show around Preston in Lancashire (jnct 28 or 29 M6) in about March, anyone who would like to be mailed with details or any Spectrum, QL, Z88 companies or peripheral suppliers please contact us for details.

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PSsst!

A last look at the computer scene by cynical old hack, Private I

Mad Max and the Dame

"It's not true. Robert Maxwell hasn't bought us. It hasn't happened, it won't happen and there's no reason for it to happen. We're very happy where we are, thank you," said the dame from Telecomsoft.

You heard the lady.

I'd been told that the contract was out for Telecomsoft and that Big Robert and da boys were the ones gunning for it.

It coulda been my big break. Mad Max flashes his monster chequebook and the Telecom crew bite the bullet. But no. The Queen Bee Paula Byrne says not. She's happy living with the uptown mob at Telecom.

So I call my contacts. "Hey, who's the bigshot with the Telecom contract? Just gimme a break. Just gimme a name. I need the story."

The trail went to Virgin. Branson's crowd think big. They took out the east-side gang Mastertronic just the other week. Maybe they now got the hots for Telecom. But my man says no comment. No comment? Whaddya mean with your no comment? I need that like a need a hole in the head.

Things were looking desperate – like a great gap on page two type desperate.

Who'll give me the big tip? I call the biggest name in contract software – he'll know. Tell me, just tell me. So he begins, and I feel the rush of blood like I never felt since I heard how Big Al did for Cambridge Clive. Makes your blood run colder than smashed ice-cubes. The guy sure knows his stuff – but the guy knows nothing about the Telecom heist. Maybe he's the one gunning for them. But I got no takers on that one.

So it's back to Mad Max. I nail one of his men and hit him hard. You've taken out Telecom, right? Wrong. 24 carat wrong. He sure runs a neat operation. All trails lead to Big Robert, but all trails go dead. It just don't stack up. Someone's gotta squeal.

Maybe it's the Lady Paula. Maybe she's planning an inside job to buy herself out of Corporationsville.

But it's the big zero again. Everything means less than zero. I'm on a one way ticket to the Machine Specifics if I can't get this one to stand up.

So I gotta go with Max. He's the man. He's buying Telecomsoft and you read it here first. ●

• Robert "Mad Max" Maxwell: Are you for sale?

• Paula "the Dame" Byrne: No

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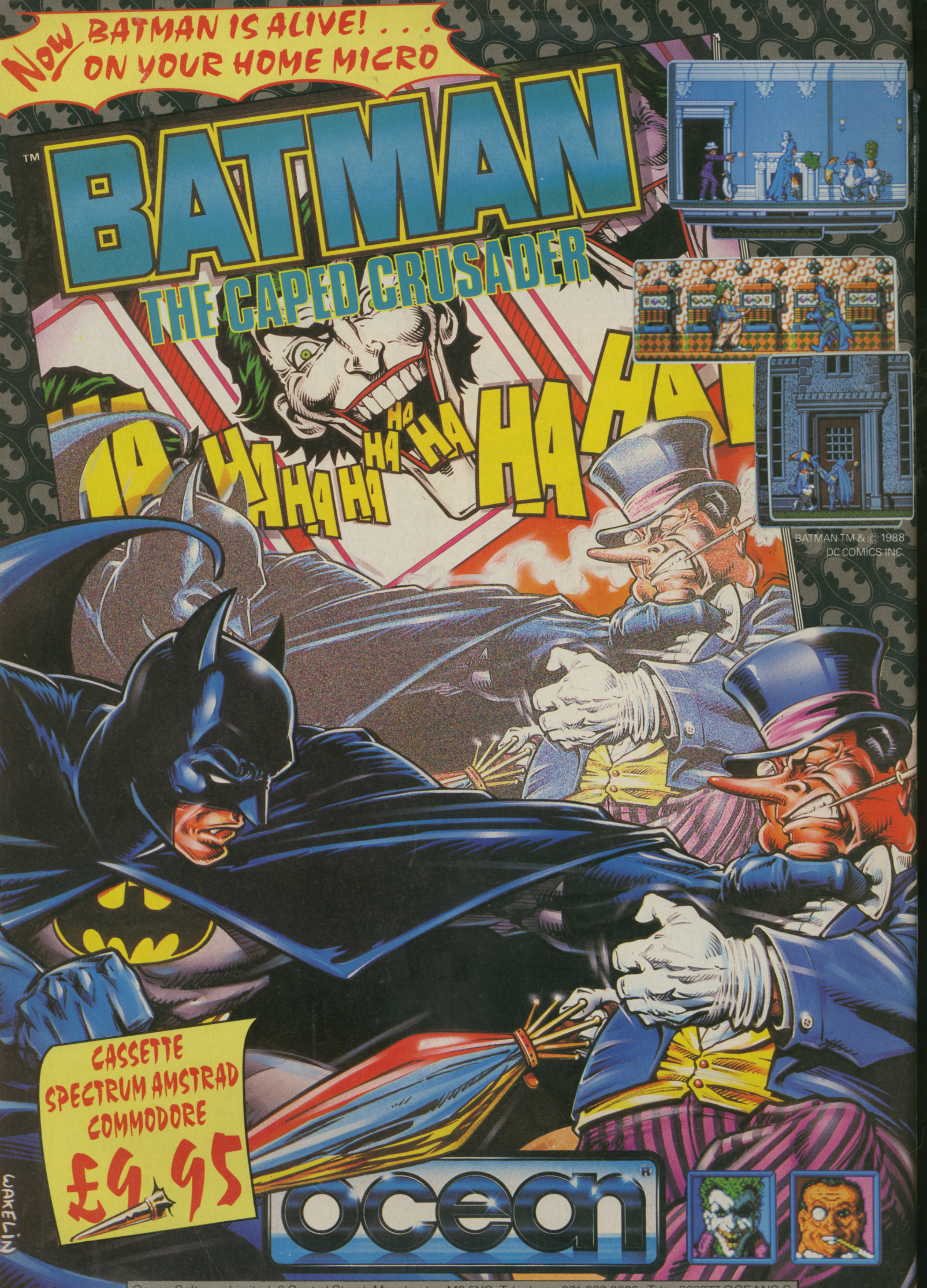
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